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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Hearing held
8th floor
180 Dundas Street West
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

P.S.A. Lamek, Q.C.

E.A. Cronk

Thomas Millar

TAYLOR

In Chief

X: Roland

Commissioner

Counsel

Associate Counsel

Administrator

Transcript of evidence
for

October 3, 1983

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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN
AND RELATED MATTERS.

Hearing held on the 8th Floor,
180 Dundas Street West, Toronto,
Ontario, on Monday, the 3rd day
of October, 1983.

- - - - -

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

- - - - -

APPEARANCES:

P.S.A. LAMEK, Q.C.) Commission Counsel
E. CRONK)

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L. CECCHETTO) of Ontario (Crown Attorneys
and Coroner's Office)

I.J. ROLAND) Counsel for The Hosiptal for
R. BATTY) Sick Children
M. THOMSON)

D. YOUNG Counsel for The Metropolitan
Toronto Police

K. CHOWN Counsel for numerous Doctors
at The Hospital for Sick
Children

F. KITELY Counsel for the Registered
Nurses' Association of Ontario
and 35 Registered Nurses at
The Hospital for Sick Children

(Cont'd)



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Nurse

G.R. STRATHY

Counsel for Phyllis Trayner -
Nurse

J.A. OLAH

Counsel for Janet Brownless -
R.N.A.

S. LABOW

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Mr. & Mrs. Gionas, Mr. & Mrs.
Inwood, Mr. & Mrs. Turner, Mr.
& Mrs. Lutes and Mr. & Mrs.
Murphy (parents of deceased
children)

F.J. SHANAHAN

Counsel for Mr. & Mrs. Dominic
Lombardo (parents of deceased
child Stephanie Lombardo); and
Heather Dawson (mother of
deceased child Amber Dawson)



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---Upon commencing at 10:00 a.m.

MS. CRONK: Good morning, sir.

THE COMMISSIONER: Good morning,
Ms. Cronk. Yes, Ms. Cronk?

MS. CRONK: Our next witness, sir,
is Dr. Glen Taylor. Dr. Taylor, please.

DR. GLEN PAUL TAYLOR, Sworn

DIRECT EXAMINATION BY MS. CRONK:

Q. Dr. Taylor, as I understand it,
you obtained your medical degree at the University
of British Columbia in 1966, is that correct?

A. Yes.

Q. Then the following year you
did your postgraduate internship at the Toronto
General Hospital?

A. Yes.

Q. And from July of 1977 to June
of 1979 you did your residency as I understand it in
pathology at the Vancouver General Hospital, is that
correct?

A. That's correct.

Q. And then as I understand it
you joined the Department of Pathology at the
University of Toronto again as a resident, that in
July of 1979?



1

2

A. Yes.

3

Q. And you remained in that

4

position until June of 1981?

5

A. That's correct.

6

Q. Now, Doctor, as I understand

7

it, in July of 1981 you joined the Department of

8

Pathology at Children's Hospital in Vancouver as an

9

assistant pathologist?

A. Yes.

10

Q. And you remained there until

11

when, sir?

12

A. The hospital moved in July,

13

1982 and I went with the hospital. So, I am now at

14

the British Columbia Children's Hospital.

Q. All right.

15

A. As an assistant pathologist.

16

Q. All right. And you continue

17

to hold the position of an assistant pathologist?

18

A. Yes.

19

Q. Thank you. Doctor, during

20

your two years as a resident at the Vancouver

21

General Hospital did your responsibilities include

22

the performance of autopsies?

A. Yes.

23

Q. Do you have any idea, Doctor,

24

25



1

2

as to how many autopsies you performed during that
two year term as a resident?

3

4

A. I'm sorry, which two year term?

5

6

Q. The two years you spent as a
resident at Vancouver General Hospital?

7

A. Approximately 90 to 100.

8

9

Q. And then you've told us, sir,
that you did part of your residency following that
at the University of Toronto?

10

A. Yes.

11

12

Q. And as I understand it, part
of the residency term was spent at the Toronto General
Hospital and part of it at Toronto Western Hospital?

13

14

A. Yes.

15

Q. Do I have that correctly?

16

17

A. Yes.

18

Q. And as well you did part of
that residency at the Hospital for Sick Children in
the Department of Pathology?

19

A. Yes.

20

21

Q. When did your rotation at the
Hospital for Sick Children commence?

22

A. January 1st, 1981.

23

Q. And how long did it last,

24

Doctor?

25

26



1

2

A. Six months.

3

4

Q. So, you were finished then at
the end of June, 1981?

5

A. End of June, 1981, yes.

6

7

8

9

Q. Thank you. During your rotation,
Doctor, at the Toronto General Hospital and the
Toronto Western Hospital here in Toronto, did your
duties at those two hospitals during that part of your
residency term include the performance of autopsies?

10

A. Yes.

11

12

13

14

Q. Again, Doctor, you may not be
able to do this but can you help us with an approxi-
mation as to how many autopsies you might have
performed during that part of your residency training?

15

A. 40 to 50.

16

17

18

19

Q. And similarly during your
rotation at the Hospital for Sick Children, as I
understand it, the Department of Pathology, that
included as part of your duties the performance of
autopsies?

20

A. Yes.

21

22

23

24

25

Q. Doctor, you have been kind
enough to provide me this morning with a copy of
your curriculum vitae. I would ask you to look at it
and if you can identify it is such, I will then



1

2

arrange, sir, for copies to be made and to be
distributed to other counsel.

4

A. Yes.

5

THE COMMISSIONER: Thank you.

6

MS. CRONK: Q. Did you look at that,
sir? Is that your curriculum vitae?

7

A. Yes, it is.

8

MS. CRONK: Thank you.

9

THE COMMISSIONER: Exhibit 204.

10

---EXHIBIT NO. 204: Curriculum Vitae of Dr. Glen
Paul Taylor.

12

MS. CRONK: Thank you, sir.

13

Q. Doctor, as I understand it,
following the commencement of your rotation at the
Department of Pathology at the Hospital for Sick
Children in January of 1981, you had occasion to
perform an autopsy in respect of a patient known as
Janice Estrella. Do I have that correctly?

18

A. Yes.

19

Q. Did you personally perform
that autopsy, Doctor?

20

21

A. Yes, I did.

22

Q. The patient died, we have
heard in previous evidence, on January 11, 1981 and
the autopsy, as I understand it, was conducted on the

24

25



1

2

same day, that is, January 11th, later in the day.

3

Do I have that correctly?

4

A. That's right.

5

Q. All right. While you were

6

performing that autopsy, Doctor, were you doing so

7

under the supervision of any other member of the

8

Pathology Department at the Hospital?

9

A. Yes, Dr. Mancer.

10

Q. Dr. Mancer. Prior to the

11

case of Janice Estrella, Doctor, had you had occasion

12

to perform any autopsies at the Hospital for Sick

Children?

13

A. I did one autopsy earlier

14

that same day. That was the first autopsy at the

Sick Kids' Hospital.

15

Q. So, the autopsy on Janice

16

Estrella then would have been the second at the

17

Hospital for Sick Children?

18

A. Yes.

19

Q. And you have told us, Doctor,

20

that during the course of the previous three and a

21

half years of your residency at various hospitals,

22

both in Toronto and in Vancouver, you did have

23

occasion to perform a number of autopsies and you

24

have told us I think 90 during the first two years

25



1
2 and you would approximate it to be approximately 50
3 in the third year?

4 A. Yes.

5 Q. Were any of those autopsies
6 performed on infants, Doctor?

7 A. Yes.

8 Q. All right. Can you help me,
9 Doctor, if we could deal for the moment with the
10 autopsy that you performed in respect of Janice
11 Estrella? Can you help me first as to the steps
12 that you followed prior to actually conducting the
13 gross autopsy? Did you for example have an opportu-
14 nity to review the medical record of the patient
before commencing the gross autopsy?

15 A. Yes.

16 Q. All right. Did you review it
17 in the company of Dr. Mancer or did you have occasion
18 to discuss its contents with him before the gross
autopsy was commenced?

19 A. I didn't discuss it in the
20 presence of Dr. Mancer. Prior to starting the
21 autopsy I informed Dr. Mancer of the autopsy that
22 I was going to do and I gave him a bit of the
23 clinical summary of the case.

24 Q. Do you recall now, Doctor, I
25



1
2 recognize it is some years after the event, but do
3 you recall now what matters you brought to Dr. Mancer's
4 attention on the basis of your review of the medical
5 record?

6 A. I'm sorry, I don't.

7 Q. All right. Now, other than the
8 medical record and the review which you did of the
9 record before conducting the gross autopsy, did you
10 have an opportunity to discuss the case with any
11 of the cardiologists that had been involved in the
12 care of the patient?

13 A. Yes. Prior to starting the
14 autopsy I was requested to contact Dr. Freedom and
15 I briefly spoke with him about the case.

16 Q. All right. Can you tell me
17 who requested you to contact Dr. Freedom?

18 A. My recollection is that there
19 was the handwritten note attached to the chart,
20 Estrella chart.

21 Q. Yes.

22 A. Asking me to contact Dr. Freedom
23 and there was a number. I can't recall if it was a
24 telephone number or a page number.

25 Q. And when you say that you
recall a handwritten note being attached to the chart,



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was it on the inside of the medical chart proper?

A. No, it was just attached by a paperclip or scotch taped to the cover of the chart.

Q. All right. And I take it then having seen the note you did contact Dr. Freedom?

A. Yes.

Q. Was Dr. Freedom in the Hospital at the time or was he at home or elsewhere?

A. I can't remember where he was.

Q. Did you see Dr. Freedom personally or did you speak to him by telephone?

A. I spoke to him by phone.

Q. And can you help the Commissioner with the nature of the discussion that you had with Dr. Freedom at that time?

A. He gave me a brief background on the case and told me some of the clinical concerns and requested that I take a digoxin sample.

Q. Well, dealing first, Doctor, with the brief background of the case and some of the clinical history. Do you recall now what Dr. Freedom said with respect to the clinical history of the child?

A. No.

Q. Do I have it correctly, Doctor,



1
2 that this conversation took place between Dr. Freedom
3 and yourself before you commenced the gross autopsy
4 itself?

5 A. Yes.

6 Q. And you have indicated that
7 Dr. Freedom asked you to take a digoxin level?

8 A. That's correct.

9 Q. All right. Can you help me,
10 Doctor, did Dr. Freedom explain to you at that
11 time why he wanted a sample taken for a digoxin level?

12 A. Yes. I asked him and he said
13 that there had been some trouble controlling the
14 digoxin, the therapeutic digoxin level in Estrella
15 and he wanted the digoxin level to see if there was
16 any problem.

17 Q. All right. In all of the
18 autopsies which you had performed at various
19 hospitals, I recognize that you have told us that
20 there was only one earlier that day at the Hospital
21 for Sick Children, had you had any occasion in
22 conducting those prior autopsies to order an assay on
23 a digoxin sample taken post mortem?

24 A. No.

25 Q. Was this the first time that
a request of that kind had been made of you?



1

2

A. Yes.

3

Q. All right. And in those

4

circumstances, Doctor, were you surprised that the
request was being made?

5

6

A. Yes, that's why I asked him
why he wanted the specimen.

7

8

Q. Right. Did Dr. Freedom indicate
to you what the nature of the problem had been with
the levels on Estrella?

9

10

A. Yes. As I said, he mentioned
that they had trouble, some difficulty in controlling
the therapeutic levels of digoxin in the child and
he just wanted to check.

11

12

13

14

Q. Right. Did Dr. Freedom
indicate to you what the levels had in fact been
during the child's life?

15

16

A. No.

17

Q. Based on your own review of

18

the medical record, do you recall now having made a
note of what the digoxin level readings had been for
Janice Estrella during life?

19

20

A. I didn't make a note of it, no.

21

22

Q. All right. Doctor, you have
told us that the autopsy was performed on January

23

the 11th and we have heard in prior evidence that the

24

25



1
2 child died at approximately 3:20, 3:22 a.m. that
3 morning. The final autopsy report -- perhaps
4 to assist you, Mr. Registrar, if you could show the
5 Doctor Exhibit 91 if you would, it is the medical
6 record of Janice Estrella. You have it there,
7 Doctor?

8 A. Yes.

9 Q. Could I ask you to turn to
10 page 9 if you would.

11 A. Yes.

12 Q. Doctor, you will see from the
13 note contained on the final autopsy report that it is
14 indicated that the autopsy was 11½ hours after death.

15 A. Yes.

16 Q. I take it, Doctor, that that
17 refers to the time at which the gross autopsy was
18 commenced?

19 A. Right.

20 Q. Do I have that correctly?

21 A. That's correct.

22 Q. All right. That would then
23 be, if the child died at approximately 3:20 in the
24 morning, at approximately 2:50 in the afternoon
25 would be when the gross autopsy was commenced.

A. Yes.



1

2

3

4

Q. All right. Can you help me, Doctor, in that time frame, do you recall when you spoke to Dr. Freedom?

5

6

7

8

9

A. I can't recall exactly how soon before the autopsy was started that I talked to Dr. Freedom but it would be just within a half an hour I assume, just prior to starting the autopsy I would call him.

10

11

12

13

14

Q. All right. Well, Doctor, we know that the child died early in the morning on the 11th and that the autopsy commenced mid-afternoon. Do you have any recollection today as to when the child's body was brought into the lab for the purposes of the autopsy?

15

16

17

A. I'm sorry, I don't know if the body was brought up at the same time the earlier case that I did was done or whether it was brought up after I completed the second case.

18

19

20

21

Q. Can you help me, does your recollection take you this far, Doctor? Do you recall whether you spoke to Dr. Freedom during the working day, during the morning or the afternoon?

22

23

24

25

A. I can't recall specifically but I assume it was just prior to starting the autopsy, which would be the afternoon.



1

2

3

Q. Had you met Dr. Freedom prior
to telephoning him with respect to this case?

4

A. No.

5

6

Q. All right. Did you have any
understanding as to whether or not he was involved
in the care of Janice Estrella?

7

8

A. No.

10

Q. Did you know who you were
talking to at that stage?

11

A. Yes.

12

Q. Who did you think Dr. Freedom
was?

13

14

15

16

17

18

A. I knew that he had a cross
appointment in the Department of Pathology and was
interested in the morphology of congenital hearts
and that he was to be called on all congenital heart
cases and therefore it didn't surprise me that I
was requested to call Dr. Freedom before starting
this case.

19

20

21

Q. And when you called Dr. Freedom
did you identify yourself as the pathologist who was
going to perform the autopsy?

22

A. Yes.

23

24

25

Q. Doctor, when you joined or
commenced your rotation at the Hospital for Sick



1
2 Children in the Department of Pathology, were you
3 requested to go through any kind of orientation
4 session whereby the rules and practices of the
5 Department of Pathology would have been explained and
6 discussed with you?

7 A. I can't recall if there was a
8 formal session. There certainly was an introduction
9 to the laboratory but I can't remember if there was
10 a formal introduction to the procedures of the
laboratory.

11 Q. All right. To the best of your
12 recollection, Doctor, at the time that you commenced
13 your rotation in the Pathology Department, was any
14 discussion held or any rules or guidelines
15 explained to you with respect to the taking of blood
16 samples at autopsy for the purposes of postmortem
drug assays?

17 A. No.

18 Q. Did you have any discussions
19 or did you receive any instructions from any members
20 of the Pathology Department as to the circumstances
21 in which a drug screen may be ordered in respect of
22 a particular patient?

23 A. No.

24 Q. To the best of your knowledge,
25



1
2 Doctor, or did you have any understanding as to
3 whether or not postmortem digoxin assays were
4 ordered as a matter of routine at the Hospital for
5 Sick Children at autopsy?

6 A. I have never encountered the
7 topic of postmortem digoxin or assays until this
8 particular case.

9 Q. Doctor, after you had had your
10 discussion with Dr. Freedom, I take it you then
11 proceeded to conduct the gross autopsy?

12 A. Yes.

13 Q. All right. Prior to doing so,
14 did you have any further discussion with Dr. Mancer
15 about the autopsy?

16 A. No.

17 Q. Did you inform Dr. Mancer that
18 Dr. Freedom had requested you to take a sample for
19 a postmortem assay on digoxin?

20 A. No.

21 Q. Did you discuss that request
22 at that time with any of your colleagues in the
23 Department of Pathology other than Dr. Mancer?

24 A. Not at that time, no.

25 Q. Can you help me, Doctor, in
terms of your own factors which you noted on your



1
2 review of Janice Estrella's medical record, did you,
3 on the basis of that review and your discussion with
4 Dr. Freedom, have in mind at that time any possible
5 cause of death which might present itself on autopsy?

6 A. My impression was that she was
7 a very sick child that had steadily deteriorated
8 following her heart surgery and she had a prolonged
9 requirement for assisted ventilation and she had a
10 fever related to her chest surgical wound infection
11 and that she had possibly some other respiratory
12 problems. I was keeping in mind heart failure and
possibly pneumonia or other respiratory complications.

13 Q. Anything else, Doctor?

14 A. No.

15 Q. Doctor, was there, on the basis
16 of your review of the medical record and as well your
17 discussion with Dr. Freedom, any issue or concern
18 in your own mind at the time you were conducting the
19 gross autopsy as to whether or not digoxin may have
played a part in this child's death?

20 A. No.

21 Q. All right. In your discussion
22 with Dr. Freedom was any suggestion made that digoxin
23 may have in some way contributed to this child's
24 death?
25



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A. No.

Q. Was that a matter that was discussed between Dr. Freedom and yourself?

A. Not specifically. It was presented to me that that child, that there had been some difficulty in controlling the child's digoxin levels during life and at that time I was just simply asked to obtain the sample for a check. It wasn't presented to me that there was a concern about possible digoxin toxicity.

Q. And I take it, Doctor, from what you have said that on the basis of your own review of the medical record and the discussion that you had with Dr. Freedom that was not a matter which you then concluded was of concern at that stage?

A. That is correct.

Q. Doctor, during the course of the gross autopsy itself, was Dr. Mancer physically present during the course of that autopsy?

A. No.

Q. Do you recall Dr. Freedom being there?

A. No.

Q. All right. During the course of your discussion with Dr. Freedom, did he indicate



1
2 that he intended to be there for the gross autopsy
3 of the child?

4 A. I can't recall for sure. I
5 believe that he eventually reviewed the heart
6 morphology with me. I can't remember if it was that
7 day or some time later.

8 Q. But during the course of the
9 gross autopsy itself, I take it he was not in the
10 lab, to the best of your recollection?

11 A. I can't recall, no.

12 Q. Doctor, while you were performing
13 the gross autopsy, did you, as you had been requested
14 by Dr. Freedom, take a sample or samples for the
15 purposes of a postmortem digoxin assay?

16 A. Not during the actual performance
17 of the actual autopsy, no, I forgot.

18 Q. Did you subsequently do so?

19 A. Yes.

20 Q. Can you tell us how that
21 came about, Doctor?

22 A. After I completed the gross
23 dissection I went to write notes on my findings and
24 as I was reviewing it, the clinical history and
25 the findings, I remembered that Dr. Freedom requested
that I take a digoxin specimen. By this time the



1
2 body had been taken from the autopsy suite to the
3 morgue. I asked advice from one of the fellows in
4 the room at the time whether or not I should attempt
5 to obtain the sample and he suggested that I should
6 attempt to obtain the sample.

7 Q. Well, if I could stop you there
8 just for a moment, Doctor. Could you help me first,
9 how long did the gross autopsy itself take?

10 A. I can't recall specifically.
11 Based on my abilities at that time I would say three
12 to four hours.

13 Q. All right. Well, Doctor, if
14 I'm correct, as I think you have told me, that the
15 autopsy would have been commenced at approximately
16 2:50, 3:00 p.m. in the afternoon, do I have that
17 correctly?

18 A. Yes.

19 Q. As approximately when it would
20 have commenced?

21 A. Yes.

22 Q. And I take it would have been
23 completed by your estimation some time between 6:00
24 and 7:00 p.m. that evening?

25 A. Yes.

Q. You have then indicated that



1

2

you began to write up your notes from the autopsy
and realized at that time that you had forgotten to
take the samples?

3

4

A. That's correct.

5

6

Q. Did you proceed to write your
notes up from the autopsy, based on your observations
at autopsy right after you had completed the gross
autopsy?

7

8

A. Yes.

9

10

Q. All right. So, if the autopsy
then was completed at approximately 6:00 or 7:00 p.m.
can you help me as to what time frame it would have
been within which you realized that you had forgotten
a sample and went back to get it?

11

12

A. 15 or 30 minutes after I
completed the autopsy.

13

14

Q. All right. So, we would then
be talking approximately 6:30 or 7:30, depending on
when the autopsy itself had been completed?

15

16

A. Yes.

17

18

Q. And you have indicated that
you discussed the matter once you realized you had
forgotten to take the sample with one of your
colleagues?

19

20

A. Yes.

21

22

23

24

25



1

2

Q. Who was that, Doctor?

3

A. It was Dr. John Gillan.

4

Q. And on the basis of your

5

discussion with Dr. Gillan, I take it that you

6

concluded that you should go back and get the sample?

7

A. Yes.

8

Q. Did you do so alone or did

9

Dr. Gillan accompany you?

10

A. He accompanied me. At that

11

time I didn't know where the morgue was, so, he had

12

to show me where the morgue was, and he assisted

13

Q. All right. By that time then,

14

Doctor, I take it that the body, you had completed

15

the autopsy, the body had been taken from the lab

16

and placed in the morgue?

17

A. That's correct.

18

Q. And the body under those

19

circumstances would have been restitched or closed

20

A. Yes.

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Q. Doctor, could you help me with respect to the samples that were taken.

Between the time that you discovered that you had not taken a sample, had your discussion with Dr. Gillan and then went to the morgue, if we assume that the autopsy was completed at either 6:30 or 7:30, how long after that - let's just deal with the earliest possible time - if the autopsy was completed at 6:30, how long after that, to the best of your recollection, would it have been when you took the sample for digoxin assay?

A. Fifteen or thirty minutes later, a quarter to seven or seven o'clock.

Q. And similarly, if the autopsy was completed at seven o'clock, it would be fifteen to thirty minutes after that; right?

A. Yes.

Q. Doctor, with respect to --

THE COMMISSIONER: Sorry, I am lost. Fifteen minutes was -- whenever you finished the gross autopsy, you were making your notes and you realized that you had not taken samples for the digoxin level?

THE WITNESS: Yes.

THE COMMISSIONER: How long after



1
2 this realization was it before you got to the
3 morgue and took the sample?

4 THE WITNESS: Five or ten minutes.
5 Once it was suggested that I go back and get the
6 samples, I went immediately with Dr. Gillan, five
7 or ten minutes after my realization that I had not
8 taken the sample.

9 MS. CRONK: Q. To make sure -
10 doctor, that I understand it - and perhaps we are
11 covering ground that I have asked you about before
12 but if the autopsy was completed at six, which,
13 I gather, you have told me is about the earliest
14 it could be completed; that is, with the three as
15 opposed to the four-hour estimate --

16 A. Yes.

17 Q. -- then you would have,
18 in fact, realized that you had not taken samples,
19 had your discussion with Dr. Gillan, physically gone
20 to the morgue with Dr. Gillan and taken the
21 samples, you think, by 6:30?

22 A. Yes.

23 Q. Similarly, if the autopsy
24 was completed at seven o'clock, we are talking
25 about an additional thirty minutes so the samples
would have been taken, at the outside, by 7:30?



1

3

2

A. Yes.

3

Q. Doctor, can you assist

4

the Commissioner as to the number of samples which
you took when you returned to the morgue with Dr.

5

Gillan for digoxin assay.

6

A. I took two samples.

7

Q. Where was the first

8

sample from, doctor? What site in the body?

9

A. The femoral leg vein.

10

Q. Where was the second

11

sample from?

12

A. From the pelvic cavity.

13

Q. Dealing with the first

14

sample, doctor, that from the femoral leg vein,

15

did you take that sample personally?

16

A. Yes.

17

Q. Did you take the sample

from the pelvic cavity personally as well?

18

A. Yes.

19

Q. Was Dr. Gillan present

when you took those samples?

20

A. Yes.

21

Q. Can you help me, doctor,

22

with a description, physically, as to how you took

23

the first sample from the leg vein?

24

25



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4

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A. First, I had to recognize, the body, which I did by visual features, and the fact that an autopsy had been recently performed on the body. The body had to be reopened, unstitched and then Dr. Gillan assisted me by raising the legs and milking the legs so that I could obtain blood from the femoral veins.

8

9

10

11

12

Q. Doctor, when you say that Dr. Gillan assisted you in holding the legs and milking the legs so that you could obtain the sample, what was Dr. Gillan physically doing to assist you in that process?

13

14

15

A. One hand holding up the leg and the other hand squeezing the calf muscle and the thigh muscle to try to force blood from the deeper leg veins out.

16

17

18

19

Q. Had the femoral leg vein been cut during the course of the autopsy or were you cutting it for the purpose now of taking a sample?

20

21

22

23

24

25

A. No, it was cut during the course of the autopsy.

Q. Where was the opening of that vein, doctor, from which you intended to take the sample?



1

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2

A. The pelvic side wall.

3

THE COMMISSIONER: Take this

4

a little bit slower, please.

5

One hand of Dr. Gillan was holding

6

the leg --

7

THE WITNESS: Yes.

8

THE COMMISSIONER: -- and one was

9

squeezing the calf and the thigh, did you say?

10

THE WITNESS: Beginning at the

11

calf and moving up the leg to the thigh to try to
force any blood that was deeper in the leg out.

12

THE COMMISSIONER: I see.

13

MS. CRONK: Q. You were about,
doctor, to tell us where the opening of the vein was.

14

A. On the side wall of the

15

16

pelvis.

17

Q. That is in the area of

18

the thigh at the upper end of the leg?

19

A. Yes.

20

Q. I take it then, doctor,

that the leg was elevated by Dr. Gillan?

21

A. Yes.

22

Q. And because the leg was

23

elevated, he was, in fact, squeezing down the leg

24

25



1

6

2

from the area of the calf or the ankle towards the
opening of the vein at the upper part of the leg?

3

4

A. Yes.

5

6

Q. What were you doing in
that process?

7

8

A. I had a syringe and was
attempting to aspirate any blood that came out of
the leg vein.

9

10

Q. I take it then, doctor,
that you withdrew the blood sample by use of a
syringe?

11

12

A. Yes.

13

Q. Did you use a needle with
the syringe?

14

15

A. No.

16

Q. When you used the
syringe to withdraw the blood from the vein, how
did you physically do that?

17

18

A. I let a little bit of blood
drain from the vein and then I applied the tip
of the syringe to the area of the opening of the
vein and aspirated any drops of blood that came out.

19

20

21

22

Q. By "aspirated", doctor,
we have heard the term before, but it is my under-
standing that that simply means withdrawing the

23

24

25



1
2 blood into the syringe?

3 A. Yes, pulling back on the
4 plunger of the syringe to suck in the blood.

5 Q. Was the syringe applied,
6 doctor, to the opening of the vein itself?

7 A. Very close to the
8 opening. I cannot recall if I put it in the vein.
9 I suspect not since it was a small vein.

10 Q. If it was a small vein,
11 doctor, can you help me as to why the use of the
12 needle attached to the syringe was unnecessary?

13 A. It was not unnecessary. It
14 was a hindrance because small fragments of tissue
15 could get caught in the tip of the needle and prevent
16 me from sucking in any blood. So, I specifically
17 use a syringe without a needle so that that
18 problem would not occur.

19 Q. In your mind then, doctor,
20 when you took the sample, was there the risk or the
21 possibility that tissue extracts or remnants had
22 attached to the syringe such that they would be
23 included together with the blood in the sample that
24 had been taken?

25 A. No. I tried to get a
clean sample of blood.



1

8

2

Q. Doctor, we have heard

3

something as well about the process of sterilization
when a serum or blood sample is taken from the body.

4

5

Because you were drawing this
sample directly from the vein, was there any
necessity, in your view, to sterilize the surface
of the body from which the sample was being drawn?

6

7

8

A. No. Surfaces are

9

sterilized only if I am interested in obtaining a
bacteriological culture so I can exclude any
contamination, but for electrolyte assays or other
chemicals, I do not bother sterilizing surfaces.

10

11

12

Q. I take it that, in this

13

case, it was not done?

14

A. No.

15

Q. Because the purpose of

16

this sample was for digoxin assay; not for bacterio-
logical culture?

17

A. That's right.

18

Q. Doctor, with respect as

19

well to the site from which you took the sample,
was there, in your view at the time, any risk of
contamination with respect to the blood that you were
drawing back into the syringe?

20

21

22

A. I, at the time, thought

23

24

25



1
2 that it was a clean specimen; that is, it
3 represented the blood that was in the leg veins
4 without any significant contamination from sur-
5 rounding tissue or fluids.

6 Q. Doctor, we have heard
7 something in evidence as well about the process
8 whereby a receptacle or container might be used
9 to be held under the site from which the sample is
10 to be taken to collect the serum.

11 I take it that that was not the
12 procedure you used in this instance?

13 A. No.

14 Q. Doctor, can you tell us
15 now, if you would, about the second sample that
16 you draw. I believe you said it was from the
17 pelvic cavity.

18 A. I did not obtain what
19 I thought was sufficient sample from the milking of
20 the leg veins and I could not think of any other
21 site from which to obtain uncontaminated blood --

22 THE COMMISSIONER: Did you just use
23 one leg?

24 THE WITNESS: No, I used both
25 legs.

THE COMMISSIONER: Both legs. So,



1
10 2 the sample came --

3 THE WITNESS: It was a mixture
4 of a small amount of blood from both legs.

5 THE COMMISSIONER: That would,
6 of course, involve two veins; one in the left leg
7 and one in the right leg.

8 THE WITNESS: Yes.

9 THE COMMISSIONER: I take it you
10 took some from one and some from the other?

11 THE WITNESS: Yes.

12 I realized I did not obtain very
13 much blood using that technique. There was blood
14 in the pelvic cavity, and I took a larger sample from
15 that site.

16 MS. CRONK: Q. What was the method
17 whereby you obtained that sample?

18 A. I used a syringe without
19 a needle, again, to aspirate some blood.

20 Q. Did Dr. Gillan assist you
21 in that procedure?

22 A. No, it was not necessary.

23 Q. I take it then, doctor,
24 that the body, of course, had to be reopened when
25 you went back to the morgue --

A. Yes.



1
112 Q. -- and, once reopened,
3 you inserted the syringe directly into the pelvic
4 cavity?

5 A. Yes.

6 Q. Was there, in your view
7 at the time, doctor, any risk of contamination of
8 that sample?

9 A. Yes.

10 The reason that I first went to
11 the leg veins was because I recognized that the
12 blood in the pelvic cavity was almost certainly
13 contaminated by tissue fluids, the ascetic fluid
14 the child had and probably the water that was used
15 to wash down the body after the autopsy was
16 completed.

17 Q. Anything else, doctor?

18 A. It is possible that
19 even fecal material could have contaminated the
20 fluid since the bowel was cut during the performance
21 of the autopsy. Urine is a possible contaminant.

22 Q. I take it, doctor, that
23 a number of those potential contaminants would
24 all have been in fluid form?

25 A. Yes.

Q. And I take it, doctor,



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that during the course of the autopsy itself, a number of those fluids would have accumulated in the pelvic cavity?

5

A. Yes.

6

7

8

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Q. Would I be correct then, doctor, in attempting to understand your concern about contamination as regarding it as a concern that the sample you were drawing might be contaminated by preaccumulated fluids which had seeped into the pelvic cavity during the course of the autopsy itself?

11

12

13

14

A. In part, also, the fluids could have accumulated after I completed the autopsy. There would be continued weeping of fluids from the raw surfaces of the tissues into the pelvic cavity.

15

16

Q. Why is that, doctor? Simply because the tissues had been cut?

17

18

19

20

A. The tissues had been cut, yes, and the child was edematous; that is, contained too much water in her tissues, and that would start weeping out from the cut surfaces.

21

22

23

24

25

Q. If I understand your evidence correctly, then, doctor, having recognized the possibility of the contamination of sample from that source, you first attempted to take a sample



1
13 2 from the leg veins?
3 A. That is correct.
4 Q. That was your reason for
5 going to that site in the body to take that sample?
6 A. Yes.
7 Q. Then, on the basis of
8 the sample which you were able to draw, yourself,
9 you felt it was likely insufficient?
10 A. Yes.
11 Q. And you then went to the
12 pelvic cavity for a second sample?
13 A. Yes.
14 Q. Can you help me, doctor,
15 as to why a needle was not used with respect to the
16 sample you drew from the pelvic cavity?
17 A. It is faster and easier
18 to draw fluids without using a needle. A needle
19 has a small bore. The opening for the syringe with-
20 out a needle was quite a bit larger, so it was just
21 more convenient to do it that way.
22 Q. Were you concerned with
23 respect to the sample that you were drawing from
24 the pelvic cavity, as you have told us that you
25 were with respect to the sample from the leg veins,
that tissue particles might attach themselves to



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the needle such that you would not be able to draw
the sample back into the syringe?

A. No. There was sufficient
fluid. I could aspirate fluid without worrying
about getting the opening of the syringe or needle
caught up with tissue.

Q. So, in that case, I take
it then, it was a matter of convenience with
respect to the second sample that was the basis for
not using a needle?

A. It was not necessary to
use a needle, yes.

Q. And it was, as well,
quicker and more convenient?

A. Yes.

Q. Doctor, after you had
taken the samples--I take it Dr. Gillan was present
when you drew the second sample as well?

A. Yes.

Q. What did you do with the
samples at that point?

THE COMMISSIONER: Just before you
go into that, doctor, just so I understand, you say
you did not use a needle in the second instance,
the pelvic cavity, because it was unnecessary?



1
I5 2 THE WITNESS: That is correct.
3 THE COMMISSIONER: You could draw
4 it out quite easily?
5 THE WITNESS: Yes. There was a
6 pool of blood at the lower part of the pelvis.
7 THE COMMISSIONER: Would it reduce
8 the danger of contamination if you had used a needle
9 or not?
10 THE WITNESS: It would not influence
11 it.
12 THE COMMISSIONER: It would not
13 influence it at all?
14 THE WITNESS: The fluid would have
15 been contaminated an equal amount.
16 MS. CRONK: Q. Doctor, just before
17 we move on to the events which occurred after you
18 drew the samples, could you help me with this: When
19 you drew the sample from both leg veins, had the
20 leg veins been tied during the course of the autopsy?
21 A. No, they were not tied.
22 Q. In your view, had they
23 been tied, would that have any significance in terms
24 of the ability to draw a pure sample?
25 A. I don't think so.
Q. Doctor, can you help me



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then, after you had drawn both samples that you have just described, what did you then do with the samples?

A. After we restitched the body and wrapped it up again, I took the samples to the Biochemistry Department.

Q. Did you personally do so, doctor?

A. Yes.

Q. Did you complete a requisition form or forms with respect to those samples?

A. I remember completing one requisition form.

MS. CRONK: Mr. Registrar, could you show Dr. Taylor, please, Exhibit 32B.

Q. This volume is a set of various documents that were admitted as exhibits in the preliminary hearing in The Queen vs Nelles. I would ask you, if you would, to turn first to Tab 53.

A. Yes.



C/DM/ak

1

2

Q. Do you have that?

3

A. Yes.

4

Q. That appears to be, Doctor,

5

a Biochemistry Clinical, -it is described as a

6

Clinical Chemistry Requisition form. It refers to

7

Sample No. G89241, and it appears to bear your signa-

8

ture, is that your signature, Doctor?

9

A. Yes, it is.

10

Q. Is that the requisition form

11

that you completed once you had drawn the samples

from Janice Estrella?

12

A. Yes.

13

Q. And Doctor, we see at the

14

bottom left hand side of the requisition form a

15

reference to Digoxin Levels 2, I believe two specimens,

am I reading that correctly?

16

A. Yes.

17

Q. A and B?

18

A. Yes.

19

Q. And then the top right hand

20

side of the page we see: "Results to Dr. G. Taylor,

21

Department of Pathology".

22

A. Yes.

23

Q. Do you see that, Doctor?

24

A. Yes.

25



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Q. And below that under "Diagnosis" the words "Postmortem Blood for Serum Digoxin".

A. Yes.

Q. Doctor, I would ask you now to turn to the next tab, Tab 54, which again is a Clinical Chemistry Requisition Form, it refers to Sample No. G89246.

A. Yes.

Q. And at the bottom left hand side of the page the words appear: "Digoxin straight from vein", with the numbers 393 above that. Again a name or signature appears on the right hand side of the page, it is your name, Doctor, but I ask you is it your signature?

A. It is not my signature.

Q. Doctor, as well I refer you to the diagnosis section on the top right hand side of the page it says: "Results to Dr. G. Taylor, Department of Pathology".

A. Yes.

Q. Do you have any recollection, Doctor, as to the identity of the individual in the Biochemistry Department with whom you left the samples?

A. I can't recall who it was, who was the person that logged in the samples, received



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the samples, gave them numbers and sent them off, I don't know.

Q. Do you know Dr. Ellis of the Biochemistry Division at the Hospital?

A. I know of him, yes.

Q. Have you met him?

A. Once.

Q. Do you recall, perhaps you don't, Doctor, but do you recall whether it was Dr. Ellis with whom you left the samples?

A. No, it wasn't.

Q. Did you complete the requisition form that appears at Tab 53, Doctor, while you were still in the morgue, or was that completed in the biochemistry lab?

A. That was in the biochemistry lab.

Q. Do you recall being asked, or being shown another requisition form while you were there?

A. No.

Q. Doctor, when you took the two samples to the biochemistry lab, were they segregated in any way?

A. They were marked A and B, they



1

2

were in separate containers.

3

4

Q. Were they in test tubes, or
some other kind of a receptacle?

5

6

7

A. I can't recall if I just brought
the specimens in the syringe or whether I transferred
them into the test tube at the time, I am sorry.

8

9

10

Q. And Doctor, with respect to
the labelling, or any identifying marks on them, you
have indicated that they were segregated by virtue
of one being labelled A and one being labelled B?

11

12

13

A. Yes.

14

15

Q. Had you attached a sample
number to either?

16

17

18

A. No. The only number I attached
was the autopsy number.

19

20

21

Q. Doctor, can you turn with me now,
if you would, to again the medical record of Janice
Estrella, and perhaps you could keep both of these
books before you?

22

23

24

25

A. Yes.

Q. If you could turn first to page
156, if you would?

A. Yes.

Q. Do you have that, Doctor?

A. Yes.



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Q. That is a biochemistry printout, clinical chemistry cumulative report from the Biochemistry Department at the Hospital, Doctor. You will see if you look on the left hand side of the page, beside the word "date", the "11th of January, 1981"; and dropping down in that column a Specimen No. G89241, which resulted in a level of 72 nanograms. Do you see that, Doctor?

A. Yes.

Q. Would you agree with me, Doctor, that that sample number corresponds with the sample number on the first requisition form appearing at Tab 53 that we have just looked at, which appears to be the requisition form that you completed?

A. Yes.

Q. And if you will turn now to page 158 of the medical record, Doctor, two pages over, this is another clinical chemistry cumulative report from the Biochemistry Department at the Hosptial.

A. Yes.

Q. Now once again you will see the date of the sample as the 11th of January, 1981; the specimen number is G89246 and that resulted in a level greater than 4.7. Do you agree with me,



1

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Doctor, that that sample number corresponds with the sample number on the second requisition form which appears at Tab 54?

4

5

A. Yes.

6

7

Q. And that is the sample that on the face of the requisition form is indicated to be "straight from the vein"?

8

9

A. Yes.

10

11

12

13

14

15

Q. Doctor, on both of the clinical chemistry forms that we have just looked at, the first at page 156, and the second at page 158, the words appear at the bottom of the report, well, perhaps we will deal with the one on page 158 first. A date appears at the top right hand corner of the page as January 13th, 1981, do you see that, Doctor?

16

A. Yes.

17

18

Q. And then at the bottom of the page it says: "Results flagged", and then there is an asterisk "...were reported today".

19

A. Yes.

20

Q. Do you see that, Doctor?

21

A. Yes.

22

23

24

25

Q. Doctor, to the best of your recollection, can you tell us as to when you first became aware of the digoxin level of greater than 4.7



1

2

which had resulted from the sample from the leg vein?

3

4

A. It was a few days after the
autopsy, I can't recall exactly the time span, I
think within a week though.

5

6

7

Q. Do you recall now, Doctor, whether
or not it was on January the 13th that you learned
of that level?

8

9

10

A. I don't think so. That would
be a Tuesday, two days - I don't think so, I think
it was later than that that I received the report.

11

12

13

Q. Can you help me as to how
you learned of the level? You have just said you
received the report.

14

15

16

A. The report, this computer
printout sheet was sent to me in an envelope addressed
"Dr. Taylor, Department of Pathology" and appeared
on my desk one day.

17

18

Q. And was the report identical
to the one we see at page 158 as best you can recall?

19

A. As best I can recall, yes.

20

21

22

23

24

25

Q. Prior to receiving that report
when it crossed your desk, Doctor, had you received
any communication from anyone in the biochemistry
laboratory reporting to you orally as to the digoxin
level result on that sample?



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A. No.

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Q. Had you had, prior to receiving that biochemistry printout, again, had you had any communications with any member of the Cardiology Division with respect to the results of that digoxin sample?

A. No.

Q. Doctor, when you received this report, I take it you had an opportunity to look at it?

A. Yes.

Q. And note the level?

A. Yes.

Q. What was your reaction when you saw a level of greater than 4.7 on that sample?

THE COMMISSIONER: I would just like to make sure. By the time you received that you had not received any other report I take it?

THE WITNESS: No.

THE COMMISSIONER: This is the first report?

THE WITNESS: The first report.

THE COMMISSIONER: Yes.

THE WITNESS: I didn't pay much attention to greater than 4.7, it doesn't mean much.



1
2 I assumed that there would be a dilution done and a
3 subsequent and a more concrete number sent to me,
4 so I didn't pay much attention to it.

5 Q. Were you familiar at that time,
6 Doctor, with the procedure that applied in the
7 biochemistry laboratory whereby if a sample was
8 assayed and a fixed level could not be obtained
9 further dilutions might be undertaken to attain that?

10 A. Yes, I was familiar, I had
11 some familiarity with radioimmunoassay, so I knew
12 that that was the approach that was taken.

13 Q. Had you had any experience
14 prior to this case, and this level, the level of
15 greater than 4.7 which you have told us you first
16 learned about, had you had any experience prior to
17 that with drug assays at the Hospital for Sick
18 Children?

19 A. No.

20 Q. It was your understanding from
21 your experience with radioimmunoassays generally
22 that in certain circumstances dilutions would be
23 required?

24 A. Yes.

25 Q. Doctor, when you learned of
the greater than 4.7 level by virtue of receiving



1
2 this biochemistry printout, did you at that time
3 have any understanding as to what a normal therapeutic
4 range of digoxin would be for an infant?

5 A. Yes. I knew what had been
6 taught at medical school and during my internship
7 so I had an idea of the normal therapeutic range,
8 yes.

9 Q. And what was your view as to
10 what it was at that time?

11 A. 1.5 to 2.5 micrograms per litre.

12 Q. And similarly, Doctor, did you
13 at that time have any understanding, or any informa-
14 tion as to what a toxic range of digoxin would be
15 for an infant?

16 THE COMMISSIONER: No. I suppose
17 it is a silly question, but you also knew how to
18 translate micrograms into nanograms per millilitre,
19 it is the same thing?

20 THE WITNESS: It is the same number,
21 yes.

22 THE COMMISSIONER: Do you usually
23 use micrograms?

24 THE WITNESS: Yes, that was the
25 units that I was familiar with, yes. I am sorry ---

MS. CRONK: Q. No, that is quite



1
2 all right, Doctor, I should have clarified that.
3 You have told us that at the time you received this
4 level back it was your understanding, based on the
5 training you had received in medical school and
6 while an intern, that a normal therapeutic range
7 of digoxin for an infant would be 1.5 I think you
8 said to 2.5?

9 A. Yes.

10 Q. Micrograms per millilitre?

11 A. Yes.

12 Q. Did you at the same time have
13 an understanding as to what a toxic range of digoxin
14 level would be for an infant?

15 A. Not specifically for an infant.
16 I was familiar with the adult ranges. My impression
17 was one didn't start to worry until the digoxin
18 level was over $3\frac{1}{2}$ and toxic effects could be seen
19 $3\frac{1}{2}$ to 5.

20 Q. Again measured in micrograms
21 per millilitre, Doctor?

22 A. Micrograms per litre, yes.

23 Q. Per litre, I am sorry. I take
24 it with respect to the greater than 4.7 level which
25 was disclosed by the computer printout which you
received, you knew at that stage that a level greater



1
2 than 4.7 was potentially worrisome in terms of
3 toxicity.

4 A. If it was an antemortem specimen,
5 yes.

6 Q. And I take it as well, Doctor,
7 that you would agree with me that the level being
8 greater than 4.7, you couldn't have known at that
9 stage in fact what the real level was, how high it
10 was over 4.7?

11 A. That is correct.

12 Q. Doctor, when you learned of
13 the level by virtue of receiving the biochemistry
14 report, did you report it to Dr. Mancer?

15 A. Not this level, no.

16 Q. Did you have any discussions
17 with any of your colleagues in the Pathology Department
18 with respect to this level?

19 A. No.

20 Q. Doctor, can you help me as to
21 when you first learned of the level of 72 nanograms
22 that we see at page 156, which was the assay result
23 from the sample G89241?

24 A. My recollection is between 10
25 days and two weeks after I did the autopsy that that
report came to me.



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3 Q. You have told me, Doctor, that
4 to the best of your recollection today, you received
5 the computer printout for the greater than 4.7 level,
6 I think you said about a week after the autopsy?

7 A. Within a week.

8 Q. Within a week after the autopsy?

9 A. Yes.

10 Q. Can you help me, was there a
11 time spread between the day that you received the
12 greater than 4.7 level printout and the day when you
13 received the printout for the 72 nanograms?

14 A. Yes.

15 Q. Are we talking one day or
16 several days?

17 A. Several days.

18 Q. Doctor, as best, I take it
19 then as best you can fix it today, you were informed
20 of the 72 nanograms level some time between 10 days
21 to two weeks after the autopsy?

22 A. That is my recollection.

23 Q. That would be, that would
24 place it then somewhere between January 21st and
25 January 25th?

A. Yes.

Q. How did you learn of the level



1

2

of 72 nanograms, Doctor?

3

A. The computer printout sheet in

4

an envelope appeared on my desk.

5

Q. The same one?

6

A. Yes.

7

Q. And I take it again when you

8

received that printout you had an opportunity to
review it?

9

A. Yes.

10

Q. What was your reaction, Doctor,

11

when you saw a level of 72 nanograms on this sample?

12

A. I was very surprised and

13

incredulous and puzzled.

14

Q. Had you ever heard of a level

15

that high for digoxin in a child upon whom you had
performed an autopsy?

16

A. No.

17

Q. Did you have both reports

18

available to you or before you, Doctor, when you

19

received the second one with the 72 nanograms level?

20

A. I can't recall reviewing the

21

first report if I had that file with the rest of the
material for the autopsy, I don't think I reviewed it
in light of the second report, no.

22

23

Q. Doctor, did you have any

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understanding at that time, having now received the second biochemistry printout, as to which level applied to which sample?

A. No.

Q. Did you make any enquiries of the Biochemistry Department to determine which sample had resulted in those levels?

A. No.

Q. Were you in your own mind content, at that time, that you had now obtained the results on the assays conducted on both samples that you had drawn?

A. At that time I assumed that the results I obtained were the results from the specimen that was sufficient to measure, and I assumed that it was the pelvic cavity specimen rather than the leg vein specimen, because I had serious doubts about the amount of specimen I obtained from the leg vein, whether or not that could be measured. So I assumed that it was from the pelvic cavity that these numbers were generated.

Q. When you say numbers, Doctor, do I take it then you are saying that you thought both of those levels applied to the sample from the pelvic cavity?



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A. Yes.

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Q. Doctor, I know with the benefit of hindsight some of these things are perhaps easier, but we know of course that the sample numbers on those two printouts for those two levels are different?

7

A. Yes.

8

9

Q. Was that a matter that you noticed at the time?

10

11

12

13

A. No, I wasn't aware that they were given separate requisitions at that time. I wrote out one requisition, and I was expecting one report back from whatever they could measure at that time.

14

15

16

Q. Doctor, did you assume at that point that the sample which you had drawn from the leg vein had been of an insufficient quantity to permit an assay to be performed?

17

A. Yes.

18

19

20

Q. Had you ever seen a biochemistry report from the Hospital for Sick Children prior to receiving these, Doctor?

21

22

A. On the chart, yes, but I had never personally received a report, no.

23

24

25

Q. Had you ever seen one on the medical chart which you had reviewed, which showed



1
2 a sample taken for assay that had an insufficient
3 quantity for assay?

4 A. I have seen such a report,
5 yes, not necessarily at the Sick Kids' but at other
6 hospitals, yes.

7 Q. You have told me, Doctor,
8 that the very first time that you learned of a
9 level greater than 4.7 was by virtue of the bio-
10 chemistry report that crossed your desk?

11 A. Yes.

12 Q. And that you had not received
13 any earlier communication from the biochemistry
14 laboratory in an oral fashion, or by telephone?

15 A. Yes.

16 Q. Had you had any communications
17 with respect to the 72 nanograms level from the
18 Biochemistry Department before receiving that
19 computer printout?

20 A. No.

21 Q. Had you had any communications
22 with any member of the Cardiology Division with
23 respect to the levels obtained post mortem on Janice
24 Estrella, before receiving that second printout?

25 A. No.

Q. What did you do, Doctor, when



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you received the printout showing 72 nanograms?

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A. Well, I exclaimed to my fellow colleagues that were in the residence with me at that time the high results, and there was a brief discussion. I explained the circumstances under which I took the specimen and the consensus was it most likely was a contaminated specimen, and that it was an artefactual number.

Q. And on what basis was that consensus reached, Doctor?

A. The circumstances under which I took the specimen, and I assumed at this time it was all the pelvic cavity specimen, and the fact that the number was so incredibly high that it didn't make sense clinically.

Q. Doctor, do you have any recollection today as to when that discussion took place with your fellow residents?

A. Immediately after I opened the envelope and read the number..

Q. Doctor, in your own mind, I take it then that when you saw the number there was reason to doubt the validity or the reliability of the level that was reported to you?

A. Yes.



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Q. I take it that was first
because of the highness of the number itself?

4

5

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A. Both factors, the fact that
it was what I thought was a contaminated specimen;
and secondly the very high number, yes.

7

8

9

Q. Did you have any discussions
with Dr. Mancer after you had seen that level,
Doctor?

10

11

12

A. Not at that time, no.
Q. Did you have any discussions
with any member of the Cardiology Division once you
had seen that printout?

13

14

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16

17

A. A few days later I came across
Dr. Freedom in the Hospital lunch room cafeteria,
and I had a brief casual conversation with him whereby
I told him the number, told him briefly the circum-
stances under which I took it and my feeling that it
was an artefact or an error.

18

19

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Q. Doctor, if I can just stop
you there. Can you tell me this, at the time that
you received the second printout.

21

22

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A. Yes.

Q. Showing that level of 72 nano-
grams.

A. Yes.



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Q. You had already received the
first printout showing a reading of greater than
4.7.

A. Yes.



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Q. But you thought both

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those readings related to the same sample?

4

A. Yes.

5

Q. As you told us.

6

In your own mind, doctor, when
you saw those two levels, was there any concern on
your part as to whether digoxin had played a part
in this child's death?

9

A. No.

10

Q. You then told us that

11

several days later you ran in to Dr. Freedom and
you had a discussion with him as to these results?

12

A. Yes.

13

Q. Where did that discussion
take place, Doctor?

15

A. In the Hospital lunchroom
cafeteria.

16

17

Q. Was there anyone else
present other than Dr. Freedom and yourself?

18

19

A. I was having lunch or
coffee with John Gillan at that time.

20

21

Q. And to the best of your
recollection that discussion took place several days
after receiving the results?

22

23

A. I think it was more like

24

25



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two or three days after receiving the results.

3

Not immediately but within a week.

4

Q. All right.

5

And what did you tell Dr. Freedom
at that time?

6

7

A. I told him that the post
mortem digoxin level on Estrella came back at 72 and
I thought that it was a crazy number and that I had
taken the specimen in such a manner that I thought
it was contaminated, probably not significant.

10

11

12

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Q. Do you recall telling
Dr. Freedom at that time of the second level which
had been reported, the level of greater than 4.7
nanograms?

14

15

A. No, I didn't tell him of that.

16

17

Q. Doctor, you have indicated
that you mentioned the manner in which you had taken
the sample had perhaps resulted in its contamination.

18

19

Do you today specifically recall
raising the issue of contamination with Dr. Freedom?

20

21

A. I think I did, yes.

22

23

Q. Did you tell Dr. Freedom
the site from which the sample had been taken?

24

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A. I can't remember if I
went into the specifics on the acquisition of the



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sample, but I think I did tell him that I thought it was contaminated.

Q. Do you have any recollection today of having explained to Dr. Freedom why you felt the sample may have been contaminated?

A. I don't think so. It was a very brief conversation.

Q. Did Dr. Freedom make any enquiry of you as best as you can now recall it as to either the site from which the sample was taken or as to the basis for your concerns that it might have been contaminated?

A. I don't think so.

Q. Did you indicate, as best you can recall it, Doctor, that two samples had been taken?

A. I don't think I mentioned that two samples had been taken. At this time I was focused on the pelvic sample.

Q. The 72 nanograms?

A. Yes.

Q. Doctor, what was Dr. Freedom's reaction when you told him that a level of 72 nanograms had obtained with respect to the sample?



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A. He was surprised and puzzled and stated that he thought it must be an error or an artefact as well.

THE COMMISSIONER: I'm sorry, it must be...?

THE WITNESS: An error or an artefact as well.

MS. CRONK: Q. Doctor, you are distinguishing between an error and an artefact and I would like to be clear as to what you mean by that. What are you referring to when you say it must have been an error?

A. There was a problem in the laboratory testing of the specimen and there was a wrong number generated by the actual test procedure.

Q. All right.

And by an artefact, are you referring to the contamination issue?

A. Yes.

Q. Doctor, did Dr. Freedom provide you with any instructions during that discussion?

A. No specific instructions. I think he mentioned that I should check it out or



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think about it or something. I received no specific instructions.

Q. Doctor, as you are perhaps aware, Dr. Freedom has testified in his evidence before this Commission that during his discussion with you when he learned of the level he asked you to make further enquiries about the level to determine whether or not it was an error or whether an artefact had resulted in an elevated level.

Do you recall that request being made of you by Dr. Freedom?

A. I don't recall it as being a specific request to specifically go to the laboratory. My recollection was that he asked me to think about it and check it out.

Q. And in asking you to think about it or to check it out, did you have any understanding as to whom you were to check it out, as to the persons with whom you were to check it out?

A. No.

Q. Did you in fact, after your discussion with Dr. Freedom, make any enquiries regarding the level of the Biochemistry Department?

A. I did not contact the



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Biochemistry Department, no.

3

Q. Did you have any dis-

4

cussions after your discussion with Dr. Freedom with
your colleagues in the Pathology Department?

5

A. No.

6

Q. Did you then, Doctor,

7

on the basis of your conversation with Dr. Freedom

8

take any measures to check out the number to satisfy

9

yourself as to whether or not an error or an artefact

10

could account for the level?

11

A. I didn't go to the

12

Biochemistry Department or review the chart. I

13

reviewed the autopsy findings and the microscopic

14

slides at some time, not immediately, and came to

15

the conclusion that there was sufficient cause for

16

death of this infant without having to give any

significance to that digoxin level.

17

Q. Doctor, was it your

18

impression at the conclusion of the discussion that

19

you had with Dr. Freedom, and I recognize that you

20

have said it was a brief one in the lunchroom, was

21

it your impression that Dr. Freedom himself intended

22

to check that level out, to make enquiries about that
level?

23

A. No.

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D7

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Q. You have told me earlier
as well that at the time that the two levels
were brought to your attention by the Biochemistry
reports, you did not at that time report those to
Dr. Mancer?

A. That's correct.

Q. Do I have that correctly?

A. That's correct.

Q. Do I take it then that
you did subsequently have an occasion to discuss
it with Dr. Mancer?

A. Yes. The --

Q. When -- I'm sorry.

A. I'm sorry. At the
time that I completed my microscopic examination and
was ready to compose a final report with Dr. Mancer.

Q. Can you help me as to
when that was, Doctor?

A. That was several weeks
after the autopsy, beginning of March I think,
first week of March.

Q. Okay. Between the time,
Doctor, that you had the discussion that you have
just described with Dr. Freedom in the cafeteria
and the time you were in a position to sit down and



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review with Dr. Mancer the results of the micro-
scopic examination on the autopsy, I take it that
that would be the intervening period, which would
be the month of February, because your discussion
with Dr. Freedom you have told us took place several
days after you learned of the results?

A. Yes.

Q. Which puts it in either
the latter part of the third or fourth week of
January?

A. Yes.

Q. And you then discussed
the matter with Dr. Mancer during the first week of
March?

A. Yes.

Q. During that intervening
period, Doctor, can you help me as to why you
did not report those levels to Dr. Mancer?

A. I guess, well, I believe
after I talked to Dr. Freedom and had decided that
it was an artefact and that it didn't fit the
clinical and pathological findings in the case, that
it wasn't significant. So, I filed it with the rest
of the material that I had on the autopsy until the
time came to sign it out with Dr. Mancer.



D9

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Q. All right.

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A. I didn't think about it

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from that point on.

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Q. After your discussion with

6

Dr. Freedom?

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A. Right.

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Q. And again in the inter-

8

vening period; I take it because you had filed

9

the reports away with the findings, the other

11

findings on autopsy and because you didn't think

12

of it, you had no further discussions with any

13

member of the Biochemistry Laboratory or of the

14

Cardiology Division with respect to those levels?

15

A. That's correct.

16

Q. And then you have told us,

17

Doctor, that at the beginning of March you met

18

with Dr. Mancer for the purposes of reviewing the

19

autopsy report?

20

A. That's right.

21

Q. Was that meeting for the

22

purposes of reviewing the preliminary autopsy report

23

on Janice Estrella?

24

A. No. The preliminary

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report should have been issued within 24/48 hours

after the completion of the gross autopsy. The



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meeting that I had in March was to issue the final report with Dr. Mancer.

Q. All right.

Well, Doctor, to help you, we have not been able to discover in the medical record of Janice Estrella a copy of a preliminary autopsy report with respect to her autopsy.

Do you have any recollection today of having prepared one?

A. I can't recall having prepared any preliminary report but I know that I did and I can't see why I didn't do it in this specific case. I can't account for its absence from the chart.

Q. When you say, Doctor, that you know that you did prepare preliminary autopsy reports, do you mean generally or in respect specifically of Janice Estrella?

A. Generally. I can't recall specifically writing out a preliminary report of Janice Estrella but I have no reason to suspect that I didn't issue one.

THE COMMISSIONER: That would have been long before you heard of the digoxin levels?

THE WITNESS: Yes. That would have



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been within a day or two of completing the gross
dissection.

MS. CRONK: Q. Doctor, apart
from the discussion that you held with Dr. Mancer
the first week of March with respect to the final
autopsy report, and I will come back to that in a
moment, but apart from that discussion, to the
best of your recollection did you have any discussion
with Dr. Mancer prior to that with respect to the
autopsy of this child -- I'm sorry, with respect
to the results of the autopsy of this child?

A. Well, if there was a
preliminary report issued, and I have no reason to
suspect that I didn't write a preliminary report,
I would have discussed the autopsy findings, the
gross autopsy findings which would have been all
that was available at that time with Dr. Mancer.
So, I assume that I discussed the gross autopsy
findings with Dr. Mancer.

Q. But I take it, Doctor,
that you have no specific recollection of having
done so?

A. No, that's correct.

Q. Doctor, in accordance
with the procedures as you understood them in the



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Pathology Department at The Hospital for Sick Children in the normal course, would a copy of that preliminary autopsy report have been sent by you to the Medical Records Department of the Hospital?

A. No. I formulate the preliminary report, have it edited and signed by the attending staff pathologist and then the secretaries would distribute them appropriately.

Q. So that after you had prepared it and discussed it with Dr. Mancer, your involvement with the paper itself would end?

A. Yes.

Q. All right.

Doctor, was it your understanding at that time that it was the usual procedure in the Pathology Department to in fact prepare a preliminary autopsy report?

A. Yes.

Q. Dealing then, Doctor, with the discussion that you have told us you had with Dr. Mancer during the first week of March, do you recall what you told Dr. Mancer at that time, if anything, with respect to the digoxin levels that had been reported to you?



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A. I don't think I mentioned the digoxin level matter -- oh, in March, I'm sorry.

Q. First week of March.

A. I'm sorry. You are going to have to repeat the question.

Q. All right. You told us that you met with Dr. Mancer during the first week of March.

A. Yes.

Q. For the purpose of reviewing the final autopsy results.

Do I have that correctly?

A. Yes.

Q. Perhaps we can do it this way, Doctor. At the time that you met with Dr. Mancer, had you prepared a draft final autopsy report?

A. No. The initial meeting was to review the microscopic findings with Dr. Mancer and then together to come up with a list of final diagnoses and conclusions for the autopsy.

Q. And that is the meeting that you have told us took place during the first week of March?

A. Yes.



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Q. At that time, Doctor, during that discussion, did you bring to Dr. Mancer's attention the digoxin levels that had been reported to you on Janice Estrella?

A. Yes.

Q. All right.

Did you tell Dr. Mancer of both of the levels, the greater than 4.7 nanograms and the 72 nanograms?

A. I think I just mentioned the 72 nanogram reading, though both computer printout sheets were available for him to review. But I was fixated on the 72 nanograms. I can't recall speaking specifically about the 4.7.

Q. Do you recall, Doctor, whether or not you had the computer printouts with you during your discussion with Dr. Mancer?

A. Yes.

Q. Do you recall whether or not Dr. Mancer reviewed them?

A. I think he reviewed the 72 nanogram value, yes.

Q. Were you at that time, Doctor, still under the impression that the two levels which had been reported related to the same



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sample?

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A. Yes.

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Q. All right.

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What was Dr. Mancer's reaction to
the level of 72 nanograms?

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A. Well, he was very surprised by it and thought it would have had to have been an error. I mentioned to him that I was familiar with the micrograms per litre unitage, so we spent a little bit of time trying to calculate what micrograms per litre would translate to nanograms per mls and ultimately decided that there wasn't a decimal error, although that was certainly suspected.

15

16

At the conclusion of our discussion he thought that the 72 nanograms per ml was the true value.

17

18

MR. MARSHALL: I'm sorry, Mr. Chairman, I wonder if the Doctor could speak up.

19

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THE COMMISSIONER: I'm sorry, at the conclusion you decided that the 72...

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THE WITNESS: There wasn't a mathematical error in generating that number.

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S. CRONK: Q. You started to say I thought, Doctor, that at the conclusion of



1
2 the meeting Dr. Mancer felt that the 72 nanograms
3 was, and I thought you said, a valid reading?

4 MR. STRATHY: True.

5 MS. CRONK: Q. True level.

6 A. Yes. I meant that there
7 was no mathematical error. We discussed the
8 technique that I used to obtain the specimen and
9 I told him of my concern that it was a contaminated
10 specimen and he agreed that it probably was contami-
11 nated and its meaning was questionable.

12 Q. I take it then, Doctor,
13 that with respect to the 72 nanograms level you
14 explained to Dr. Mancer what sample that level
15 related to you and the manner in which you had
16 taken the sample?

17 A. Yes.

18 Q. All right.

19 Did you at that time tell Dr.
20 Mancer or discuss with him the other sample that
21 you had taken, the sample from the leg veins?

22 A. I can't recall if I
23 specifically -- yes, I did. I mentioned that there
24 were two samples taken, that of the leg veins,
25 clean sample was very small, yes.

Q. When you say "very small",



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do you mean in quantity or in the result?

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A. In quantity.

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Q. All right.

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And did you explain to Dr. Mancer
how that leg vein sample had been obtained?

6

A. Yes.

7

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Q. And did Dr. Mancer at
that time enquire of you as to what the results
had been from that sample?

10

11

A. I think he was under
the impression that I was under, that all of the
numbers referred to the larger sample at that time.

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Q. Did either Dr. Mancer
or yourself during the course of that meeting and
those discussions contact the Biochemistry Depart-
ment to determine whether or not your assumption
that the leg vein sample had been insufficient for
assay was in fact correct?

18

19

A. Not specifically during
that meeting, no.

20

21

Q. Well, to the best of your
recollection, Doctor, did you have any impression
at that time that Dr. Mancer intended to do so?

22

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A. I had the impression that
he was puzzled by that number and that he was going



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to think about it for a while, yes.

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Q. Did you have any impression that he intended to contact the Biochemistry Department?

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A. I can't say anything about that.

7

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Q. All right.
Did you yourself do so after that discussion with Dr. Mancer?

10

A. No.

11

12

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Q. With respect to the issue of contamination and the 72 nanogram level what view did you express to Dr. Mancer at that time with respect to possible contamination?

14

15

16

A. Well, I told him that it undoubtedly was contaminated and I didn't know the significance of that number.

17

18

Q. Did you explain to him why you felt it was contaminated?

19

A. Yes.

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Q. Do you remember what you told him in that regard?

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A. I can't recall exactly other than that I obtained it from the pelvic cavity, there was a mixture of tissue fluids and



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water from washing the body down and possibly
other contaminants.

Q. Did Dr. Mancer express
a view as to whether or not the sample was contami-
nated once you had told him the manner in which
you had taken the sample?

A. I believe that he
agreed that it most likely was contaminated.

Q. Doctor, could you turn
if you would with me to page 9 of the medical
record which you have in front of you. There are
actually two sets of numbers on the page. There is
a 4 and a 9.

A. Yes, I have that page.

Q. Doctor, that appears to
be the final autopsy report that was completed by
Dr. Mancer and yourself?

A. Yes.

Q. If you would turn to page
2, I take it it bears your signature?

A. Yes.

Q. You have told me that
you met with Dr. Mancer during the first week of
March for the purposes of reviewing the possible
diagnoses that were to be included in the final



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autopsy report and to review with him the results of the various microscopic examinations which had been conducted?

A. Yes.

Q. All right.

I take it then it was some time after that meeting that you would have prepared the first draft of the final autopsy report?

A. Yes.

Q. Do you recall now, Doctor, when you did so?

A. I can't recall specifically. I usually try to write up the reports within a day or two of signing them out with the staff pathologist. So, I would assume it was within a day or two of that meeting.

Q. I'm sorry, Doctor, I'm a little confused. The signing out with the senior pathologist, does it refer to the actual signing of the final autopsy report or does it refer to the discussions that you have with him as to what the final report should contain?

A. It refers to the discussion, I'm sorry.

Q. All right.



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2 THE COMMISSIONER: Why do you
3 use the phrase "signing out"?

4 THE WITNESS: I don't know. I
5 have just always used it.

6 THE COMMISSIONER: But it doesn't
7 involve any signing at all?

8 THE WITNESS: Well, I guess it
9 refers to the formal review by the staff pathologist
10 coming up with the final conclusions and passing it
11 on. The signatures are a minor part of the report.
12 It is the making up of the list of diagnoses and
13 the conclusions of the autopsy that is important.

14 THE COMMISSIONER: Well, all I am
15 really worried about, and I am not criticising
16 you, but do you sign it before you complete it,
17 that's all?

18 THE WITNESS: Oh, no, the last
19 thing that goes on the report is the signature.
20 Once the initial list of diagnoses is made up and
21 the conclusions are formulated, the report is
22 drafted and sent and proofed. Once the final proofing
23 is done, then the signature is put on it.

24 THE COMMISSIONER: That's not the
25 "signing out"?

THE WITNESS: The applying of a



signature is not the signing out, it is the reviewing of the autopsy and making a list of diagnoses that is referred to as a "signing out".

THE COMMISSIONER: And that is spelled s-i-g-n...?

THE WITNESS: The same way, yes.

THE COMMISSIONER: All right.

MS. CRONK: Q. I take it though, Doctor, that at some point after that discussion meeting, if I can describe it as such, you did in this case again meet with Dr. Mancer for the purposes of reviewing with him the draft final autopsy report that you had prepared?

A. Yes.

Q. All right.

And you have told me that the first meeting when the results of the autopsy were reviewed was during the first week of March and that you try after that discussion normally to have the draft of the final autopsy report prepared very quickly?

A. Yes.

Q. Do I have that correctly?

A. Yes.

Q. And do I take it then



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that in this case your first draft of the final
autopsy report would have been prepared during the
same week, the first week of March?

A. Yes.

Q. All right.

Do you recall then meeting with
Dr. Mancer to review with him the phraseology and
the contents of the first draft that you prepared?

A. I didn't meet with him
specifically, I gave him the draft to proof and
to edit as he chose, but I didn't sit down with him
and specifically go over it paragraph by paragraph,
no.

Q. Doctor, could you turn
with me to page 12 of the record, which is page 2
of the descriptive section under "History and
Clinical/Pathological Discussion of the autopsy."

Do you have that?

A. Yes.

Q. I draw your attention to
the last paragraph on page 12.

A. Yes.

Q. Which refers to samples
of post mortem blood being obtained for assay of
digoxin levels and then continues in a discussion as



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to contamination and the levels which were obtained.

Can you help me, Doctor, was that paragraph included in the first draft of the final autopsy report which you prepared?

A. That paragraph as written was not included in the first draft, no.



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Q. Doctor, was there any
mention made in the first draft of the autopsy report
which you prepared to the digoxin levels which had
resulted in this case?

A. Unfortunately I do not have
a copy of that first draft, but I recollect that I did
mention the 72 nanograms per ml digoxin level and that it
was attributed to contamination.

Q. I'm not sure what in fact
turns on it, Doctor, but the answer would be useful
to us if you can assist us.

Do you recall now, looking at the
language of that final paragraph, and we know that
this is the final version of the autopsy report,
what portion of that paragraph was under your draft-
manship and which part if any was drafted by Dr.
Mancer?

A. I know for sure that the
last sentence was Dr. Mancer's, and how much of the
first few sentences was his or mine I cannot recall.
I know that the gist of what is in the first few
sentences was included in my draft, but I do not know
if this is the exact wording.

Q. At your pre ---

THE COMMISSIONER: I am sorry, I am a



Taylor, dr.ex.
(Cronk)

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little lost. You say the last paragraph was not in the first draft. Was there a second draft?

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THE WITNESS: Yes.

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THE COMMISSIONER: In the second draft I take it you put in the reference to the digoxin levels. It was after that that Dr. Mancer put in the last sentence. Is that right?

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THE WITNESS: No, in the first draft I believe that I did mention that value, that it was our feeling that this was contamination.

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THE COMMISSIONER: That may be, but you also said the last paragraph was not in the first draft.

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THE WITNESS: As it is written now, yes.

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THE COMMISSIONER: But there was something in the first draft about the 72 level?

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THE WITNESS: According to my recollection, yes.

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THE COMMISSIONER: And what do you mean by that, according to your recollection?

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THE WITNESS: Sorry, I do not have any of the previous drafts available in my records, but I believe that I mentioned in the first draft of the final report that there was a level of 72



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2 nanograms per ml obtained and it was obtained from
3 probably contaminated blood and that it was most
4 likely an error or an artefact.

5 THE COMMISSIONER: That has not
6 survived, the second draft?

7 THE WITNESS: No. I then gave that
8 autopsy final report to Dr. Mancer who edited it to
9 come up with that last paragraph.

10 THE COMMISSIONER: He took out the
11 references to "probably contaminated" I take it, and
12 took out the references apparently also to "artefact"?

13 THE WITNESS: Yes. He said the
14 samples were contaminated slightly by edema fluid
15 and ascitic fluid.

16 THE COMMISSIONER: Do you think that
17 is his. I just want you to think about it, and you
18 do not need to come up with an answer, but ---

19 THE WITNESS: It could be mine and it
20 could be his, I cannot say for sure.

21 THE COMMISSIONER: But if it is yours,
22 it is written slightly differently from what you have
23 been telling me.

24 THE WITNESS: Yes.

25 THE COMMISSIONER: Does that help you?

THE WITNESS: I cannot recall exactly



1
2 what portion of that last paragraph was included in
3 the first report, I am sorry.

4 MS. CRONK: Q. Is your recollection
5 however clear, Doctor, that the last sentence of the
6 paragraph was added by Dr. Mancer?

7 A. Yes.

8 Q. I take it then, Doctor, that
9 the process which ensued was that you prepared the first
10 draft of the final autopsy report?

11 A. Yes.

12 Q. Provided it to Dr. Mancer
13 for his comments and his review?

14 A. Yes.

15 Q. Was that first draft with
16 annotations of any kind made by Dr. Mancer then returned
17 to you in order that a final draft might be prepared?

18 A. I think he wrote directly on
19 the draft that I gave to him, the first copy, and then,
20 with his annotations, that was handed in to the
21 secretary for typing up.

22 Q. I take it, Doctor, in due
23 course you did see the final version - the final
24 autopsy report, and were requested to sign same?

25 A. Yes.

Q. At the time that you prepared



1
2 the first draft of this report, Doctor, and at the
3 time that you signed out the final version of the
4 report, and by sign-out I mean attached your signature
5 to ---

6 A. Yes.

7 Q. Were you then still of the
8 view that the levels that had been reported to you
9 related to one sample?

10 A. Yes.

11 Q. Can you help me then, Doctor,
12 as to why at the beginning - in the first line of the
13 last paragraph reference is made to samples of post-
14 mortem blood, in the plural.

15 A. Sorry.

16 Q. The first sentence in the
17 last paragraph, Doctor, refers to "Samples of post-
18 mortem blood were obtained for assay..."

19 A. I had mentioned to Dr. Mancer
20 that there were two samples obtained and it was my
21 feeling that the clean sample was not sufficient for
22 measurement and that the 72 nanograms referred
23 specifically to the second larger specimen.

24 I guess it is sloppy wording to
25 imply that it was felt that both samples - that the
72 nanograms referred to both samples, because that



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was not the intent at that time.

Q. Perhaps the difficulty arises as well, Doctor, by virtue of the second sentence in the paragraph which reads:

"These samples..."
in the plural

"...were contaminated slightly by edema fluid and ascitic fluid."

Was it in your mind the intention at the time of completing this report to convey to those who might read the report that both samples which had been taken were slightly contaminated?

A. No, that is poor wording.

Q. I take it then that you were referring in that context to the sample from the pelvic cavity?

A. Yes.

Q. Was there any issue in your mind at that time that the first sample from the leg vein, the sample you have referred to as the clean sample, was anything other than an uncontaminated clean blood sample for digoxin assay?

A. I believe it was a clean sample without significant contamination, yes.

Q. Thank you, Doctor.



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2 Doctor, when you signed out the final
3 autopsy report - I am sorry, that is a bad way to
4 phrase it, in light of what you have said - when you
5 physically signed the final autopsy report after it
6 had been amended by Dr. Mancer, did you in your mind
7 at that time have any concern as to whether or not
8 digoxin toxicity had played any part in Janice Estrella's
9 death?

10 A. No. My initial draft, the
11 conclusions of my initial draft of the final report
12 actually are in the first paragraph on page 12. At
13 that time I issued the report with my feeling that
14 death was attributed to cardiac and respiratory
15 failure.

16 Q. I take it then, Doctor, that
17 the conclusions that are set out in the first paragraph
18 on page 12, however, which you said in your view
19 accounted for the death of the child --

20 A. Yes.

21 Q. Were findings which were
22 not consistent with a digoxin level of 72 nanograms?

23 A. The digoxin level of 72
24 nanograms did not fit with the other findings, the
25 findings of congestive heart failure and pneumonia.

Q. So there was an inconsistency



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2 in those two factors?

3 A. Yes.

4 Q. You knew that at the time of
5 signing the report?

6 A. Yes.

7 Q. Having regard, then, to that
8 inconsistency and the puzzlement over that digoxin
9 level, could you then with certainty say in your
10 own mind that the child's death was attributable to
11 the factors that you have outlined in the first para-
graph, and not to digoxin?

12 A. I did not believe that the
13 digoxin played any part in the death of this child.
14 The initial report, final report, was completed with
15 the cause of death being due to heart failure and
pneumonia.

16 Subsequently Dr. Mancer modified the
17 report to include the last sentence. He thought about
18 the digoxin level for a few days after we initially
19 formulated the diagnosis and added that some time
20 later.

21 Q. Would it be fair to say,
22 Doctor, that your conviction that the child's death
23 was attributable to the factors that you set out in
24 the first paragraph was in part the result of your
25



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2 having reached the conclusion that the 72 nanograms
3 recorded for digoxin was a contaminated result?

4 A. Yes.

5 Q. An invalid result?

6 A. Yes.

7 Q. Were that 72 nanograms to
8 have proven to be valid and reliable, your conclusions
9 might have been very different?

10 A. Yes.

11 Q. Doctor, with respect to the
12 distribution of copies of the final autopsy report,
13 do you remember the day upon which the final version
14 of the final autopsy report was actually signed?

15 A. No, I don't. Usually there
16 is a date indicated beneath the signatures and there
17 is not on this one, so I do not know.

18 Q. Do you recall how long it
19 was, Doctor, after you had provided Dr. Mancier with
20 a first draft of the report, that you received back
21 for signature a revised version of it?

22 A. I think it was two or three
23 days.

24 THE COMMISSIONER: Tell me, you may
25 not know this and it may be traditional, but why would
you sign the report on the second page when all of the



Taylor, dr.ex.
(Cronk)

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really interesting matters come in the next two pages?

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THE WITNESS: That depends on the
format of the report form. Different hospitals have
different ways of doing it.

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THE COMMISSIONER: This looks to me
as though it is not on a form at all, the signatures
of Dr. Taylor and Dr. Mancer, they are just lines and
I would have thought they were just typed in by a
secretary.

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THE WITNESS: They are just typed in.

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THE COMMISSIONER: I am not complaining
about this, but would it not seem reasonable if you
were doing it in point form on the first two pages
and then in detail on the next two pages that the
proper place to sign would be at the end of the
fourth page, would it not?

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THE WITNESS: Well, different
hospitals have different forms.

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THE COMMISSIONER: I am sorry, I
just don't think this is a form. The form "Clinical
Diagnoses" on the first page, "Anatomical Diagnoses"
all the rest of it is typed, so you could sign any-
where.

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THE WITNESS: I cannot ---

THE COMMISSIONER: You just had not



Taylor, dr.ex.
(Cronk)

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2 given - do you do this in all hospitals, have
3 signatures in the middle of the report?

4 A. No, some hospitals have the
5 signatures at the end of the report; some hospitals
6 have them following the list of anatomical diagnoses.
7 It depends on the hospital and what custom they have
8 developed.

9 THE COMMISSIONER: Do you think there
10 is any chance that you might have signed this
11 second page before completing the third and fourth
12 pages?

13 THE WITNESS: No.

14 THE COMMISSIONER: All right, thank
15 you.

16 MS. CRONK: Mr. Commissioner, might
17 this be an appropriate time?

18 THE COMMISSIONER: All right. We will
19 take 20 minutes.

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21 ---Short recess.
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---On resuming.

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THE COMMISSIONER: Yes, Miss Cronk.

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MS. CRONK: Q. Doctor, just before the break you told me, as I understood your evidence, that it was your initial discussion with Dr. Freedom in the cafeteria, which followed shortly after you had received from the Biochemistry Department the computer printout which showed the levels of greater than 4.7 and 72 nanograms; as I understood it you had no further discussions with Dr. Freedom with respect to those levels because the findings were not consistent, I believe you said, with the clinical and pathological findings which had resulted after autopsy. Do I have that correctly?

A. I had no further discussions with him, and part of the reason was because the findings were not consistent with my findings at autopsy, yes.

Q. Am I correct, Doctor, that the reason as you understood it, that Dr. Freedom had initially requested that a postmortem digoxin assay be done was because of the experience of the child during life with therapeutic levels of digoxin that had been prescribed for her?

A. Yes.



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Q. So in that sense her response to the treatment, to treatment by digoxin was something that was paramount in Dr. Freedom's mind when he made the request for a postmortem digoxin level?

A. I don't know if it was paramount, but it was something in his mind because that is the reason he gave me for obtaining the specimen.

Q. And that was something from her clinical history that he felt, as you understood it, warranted a postmortem digoxin level to be taken?

A. I accepted that request on that basis, yes.

THE COMMISSIONER: Doctor, when you said that the digoxin levels were inconsistent with your pathological findings, I had understood there were no pathological findings associated with digoxin toxicity?

THE WITNESS: There are no findings that can be seen under a microscope or with the naked eye, yes.

THE COMMISSIONER: Why do you say they are inconsistent?

THE WITNESS: I believe that there was, there were adequate findings to explain the death of



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the child and it was not necessary to use digoxin.

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THE COMMISSIONER: Yes.

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THE WITNESS: To use digoxin to explain
in any way the death of the child.

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THE COMMISSIONER: But you might just
as well I suppose put it the other way, that is the
child had died from a massive overdose of digoxin and
your pathological findings were inconsistent with
that?

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THE WITNESS: Yes.

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THE COMMISSIONER: Because if there are
no pathological findings we are still left with exactly
the same thing, the child could have died from your
pathological findings, and the child could have died
from a massive overdose of digoxin?

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THE WITNESS: Yes.

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THE COMMISSIONER: They are not really
inconsistent.

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THE WITNESS: Okay, yes.

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THE COMMISSIONER: Yes, all right.

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MS. CRONK: Q. I take it then, Doctor,
that when you told us earlier that in your view the
findings which you had set out in the first paragraph
on page 12 of the autopsy report was sufficient to
account for the child's death, that view could be put



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2 forward, and that conclusion could be reached by you
3 only if there was some reason to dismiss or ignore the
4 digoxin level of 72 nanograms. Do I have that
5 correctly?

6 A. Yes.

7 Q. Do I have it correctly as well,
8 Doctor, that although those pathological findings
9 were evident at autopsy, as you reported in the
10 autopsy report, it was also so that a digoxin level
11 showing a level of 72 nanograms had been recorded,
12 that was another factor?

13 A. Yes.

14 Q. Doctor, with respect to the
15 72 nanogram level and the sample which resulted in
16 the level, you have told us that you felt that there
17 was a risk that that sample could have been contaminated
18 by a number of factors?

19 A. Yes.

20 Q. A number of items?

21 A. Yes.

22 Q. If that was so, Doctor, in
23 your view, what effect would that have on the level
24 of digoxin measured from that sample?

25 A. Well initially, before I was
aware of some studies that have subsequently been done,



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2 I assumed the blood would be diluted and these results
3 might be lower - I am sorry, might be higher than
4 actually reported.

5 Q. I take it then, Doctor, that
6 your view at the time when you were informed as to the
7 results of 72 nanograms, was then, that if those
8 contaminants had in fact worked upon the sample they
9 would have diluted the concentration of digoxin present
10 in the sample, such that the level reported of digoxin
11 would in fact have been lower than might in fact have
12 been the case?

13 A. Might have been, yes. I
14 didn't know what effect the contamination would have,
15 but I suspected that the true level might even be
16 higher.

17 Q. And you then indicated, Doctor,
18 that at the time, I think when you started to answer
19 that question, you indicated that you were not aware
20 then of some of the studies that have been done. Do
21 I take from that, that some new information has come
22 to your attention which leads you to believe now that
23 that might not be the effect of those contaminants on
24 the sample?

25 A. Yes. I am aware that studies have
shown that postmortem levels of digoxin can be



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2 significantly higher than antemortem levels due to
3 the agent coming out of cells, especially myocardial
4 cells and tissue cells.

5 Q. I am a little bit confused:
6 the studies that you are referring to, are they studies
7 then that indicate as you understand them, that
8 postmortem digoxin levels can be higher than ante-
9 mortem levels because of a natural elevation factor
that takes place after death?

10 A. Yes.

11 Q. Those are the studies that
12 you are referring to?

13 A. Yes.

14 Q. You are not referring to any
15 studies which address the issue of the effect of
16 various contaminants in a blood sample that was taken
in an autopsy?

17 A. I am also aware of some
18 evidence that fecal material or other body fluids
19 can contain high levels of digoxin in life as well
20 as after death.

21 Q. All right. I would like
22 to be clear then apart from fecal studies which you
23 have just told us about, are you aware of any other
24 study that addressed the issue of the effect of
25



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2 contaminants in the sample site on the concentration
3 of digoxin in a blood level test done post mortem?

4 A. At the time I wasn't, and
5 subsequently I haven't looked into the literature
6 very extensively. I am just aware from a few reports
7 which I have not referenced.

8 Q. Then Doctor, would I take it
9 then that your view today as to the possible effect of
10 those contaminants on the concentration of digoxin
11 takes into account the possible effect of a high
12 concentration of digoxin in fecal materials, but other
13 than that no new information has been brought to your
14 attention which would suggest that your original view
15 that the amount of digoxin would be diluted was
16 incorrect?

17 A. I'm sorry, you will have to
18 repeat that.

19 Q. All right ---

20 MR. STRATHY: May I interrupt and
21 raise a concern. I think it is only fair to the
22 witness that Miss Cronk put his evidence to him in
23 the way it was stated. He mentioned several things
24 previously which have not now been put to him.

25 THE COMMISSIONER: I wonder if I can
help you, Mr. Strathy and Miss Cronk, I am not paying



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2 an awful lot of attention to the answer, maybe I
3 should.

4 MS. CRONK: Well ---

5 THE COMMISSIONER: But you are
6 putting the question on this, you don't pose as a
7 pharmacologist, do you?

8 THE WITNESS: My feeling at the time
9 was that it was a contaminated sample. I thought it
10 might be diluted but I didn't know what effect the
11 contamination would have on the reading and therefore
12 I didn't consider it a significant result.

13 THE COMMISSIONER: What are your
14 qualifications say in, to determine what the effect
15 of the contamination, what would be the effect of
16 death upon the digoxin levels?

17 THE WITNESS: I don't have any specialist
18 qualifications in that particular area, I can read
19 the literature.

20 THE COMMISSIONER: Yes, so can we.

21 MS. CRONK: I understand the difficulty,
22 Mr. Commissioner.

23 Q. My point was simply this.
24 Doctor, I believe you told us that at the time that
25 you were made aware of those levels it was your
view then that the effect of those contaminants



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would be to dilute the concentrations of digoxin?

THE COMMISSIONER: That is what he said but he has gone on from there as to what is his view now, and he has been reading material. As I say I am not paying a great deal of attention to the answer, but there could be, if there is something in it besides the expert opinion, which he doesn't have.

MS. CRONK: I understand, Mr. Commissioner, but perhaps the point is simply this.

Q. Dr. Taylor, when you learned of those levels, bearing in mind what you then thought the effect of the contaminants to be, I take it you could not be certain in your own mind that the actual level of digoxin that had been present was not in fact higher?

A. At the time that I first received the digoxin results back I didn't know what the 72 nanograms per ml meant, it could have been higher, it could have been lower, I didn't know that.

Q . All right.

A. The first time it was put to me that there may have been a dilution factor, was at the preliminary hearing when I was asked that question. Up until then I didn't think particularly one way or the other about it, all I knew was it was a contaminated



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specimen and was suspect for that reason.

Q. And that was also at the case
at the time you physically signed the final autopsy
report?

A. That is correct.

Q. And the possibility that the
levels, that the concentration might have in fact
been higher was equally true then as it had been when
you first learned of the level?

A. Yes.

Q. Thank you, Doctor. Doctor,
you mentioned earlier as well when I asked you what
your understanding had been as to the toxic range
of digoxin, you gave us your evidence as to what
you understood a toxic range to be. You indicated
I believe that that was an antemortem level?

A. Yes.

Q. Do I have that correctly?

A. Yes.

Q. Doctor, in your mind, based
on your understanding at the time that the Estrella
levels were reported to you, was there any distinction
in your mind between the significance of an antemortem
level and a postmortem level.

A. Yes.



1
2 Q. What was, based on your
3 knowledge at the time, what was the distinction then
4 to be made?

5 A. I didn't know specifically
6 for digoxin, but I knew that all substances changed
7 in the concentration - that there had been changes in
8 electrolyte levels, glucose levels and other levels.
9 So I recognized that there most likely was a change
10 in the digoxin level between life and death.

11 Q. And that was a distinction
12 that you drew at the time?

13 A. Yes.

14 Q. Doctor, before we broke, I
15 drew your attention as well to the issue, of those
16 who had received or intended to receive a copy of
17 the final autopsy report that both Dr. Mancer and
18 yourself ultimately signed. You told me, as I under-
19 stood it, that after the first draft had been done of
20 the final autopsy report, and you sent it to Dr.
21 Mancer for revision and it had come back to you in
22 a revised form for your signature, you then had no
23 further involvement with the document itself, do I
24 have that correctly?

25 A. Yes.

Q. Do you know, Doctor, who was



Taylor, dr.ex.
(Cronk)

1
2 intended to receive a copy of the final autopsy report?

12 3 A. I have to check the clinician
4 involved, that was Dr. Fowler, so he would receive a
5 copy; medical records would receive a copy; I would
6 receive a copy; possibly Dr. Mancer and the Department
7 of Pathology.

8 Q. Having regard to the fact,
9 Doctor, that Dr. Freedom had originally requested
10 the postmortem digoxin level, did you, after you had
11 signed the final autopsy report contact him to draw
12 his attention to the results that were reported in
that report?

13 A. No.

14 Q. To the best of your knowledge
15 was Dr. Freedom provided with a copy of the final
16 autopsy report?

17 A. I don't know.

18 Q. Was it a matter that you
19 considered doing at the time?

20 A. No.

21 Q. Did anyone from the Cardiology
22 Department, Dr. Freedom, or anyone else, contact you
23 after the final autopsy report had been signed, to
24 discuss either the digoxin level reported in the
25 final autopsy report, or the other pathological findings



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2

made mention of?

3

A. No.

4

Q. Did anyone to your knowledge

5

from the Cardiology Division contact Dr. Mancer in
that regard?

6

A. I have no knowledge of that.

7

Q. Doctor, two final matters

8

briefly, if I may. The first is related to your own

9

personal record keeping, if I can call it such: as

10

a matter of your personal practice while you were

11

doing your residency at the Hospital for Sick Children,

12

did you keep a record of the autopsies which you had
performed?

13

A. Yes.

14

Q. Did you as well keep a copy

15

of preliminary autopsy reports which you had drafted?

16

A. Not necessarily, some I kept

17

and some I threw out when the final was issued.

18

Q. In the case of Janice Estrella

19

did you personally retain a copy?

20

A. I have no such copy.

21

Q. Of either the preliminary

22

or the draft of the final autopsy report that you
have prepared?

23

A. I have only the final autopsy

24

25



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2 report as it was issued to the chart.

3 Q. Do you recall Doctor, whether
4 you kept, at some point, while you were at the
5 Hospital, a copy of the draft of the final autopsy
6 report that you had prepared?

7 A. I can't say if I kept it.
8 I think the initial draft was annotated and that was
9 submitted to the secretaries for typing so I probably
10 didn't keep it.

11 Q. Doctor, when you completed
12 your residency at the Hospital for Sick Children in
13 June of 1981 and went back to Vancouver, did you take
14 with you your personal papers at that time, or did you
15 leave them with the Medical Records Department at
16 the Hospital?

17 A. I kept some notes and copies
18 of autopsy reports, and I didn't keep others.

19 Q. Do you recall turning over to
20 the Medical Records Department copies of preliminary
21 and final autopsy reports that you had prepared?

22 A. No.

23 Q. Do you recall leaving with
24 the Pathology Department copies of preliminary and
25 final autopsy reports that you had prepared?

A. No, the Department had a copy



1
2 of all of the reports that I was involved in anyway,
3 so there was no point in it.

4 Q. Doctor, at the time you
5 conducted the autopsy of Janice Estrella, to the best
6 of your knowledge was it a parental consent autopsy,
7 or had the case been reported to the Coroner insofar
8 as you were aware?

9 A. The consent is usually indicated
10 on the report, if you will allow me ---

11 Q. To help you, Doctor, we know
12 that a parental consent was given for the purposes
13 of the autopsy and perhaps I phrased my question badly.

14 A. The Coroner was not involved
15 at the time that I did the autopsy.

16 Q. Did you have any discussions,
17 with Dr. Mancer or Dr. Freedom, or with any other
18 member of the Cardiology Division at the end of the
19 autopsy as to whether or not the death should be
20 reported to the Coroner?

21 A. No, I did not.

22 Q. Did it occur to you, Doctor,
23 that that was a matter that should be considered?

24 A. It did not appear to fit the
25 criteria for a coroner's case.

Q. Why was that, Doctor?



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A. The child had a natural illness; there was a significant morbidity associated with it. The child had surgery and went progressively downhill and it was anticipated that she would die, and she died. I found nothing at my gross autopsy to indicate that the death was caused by anything other than natural process.

Q. And after completion of the gross autopsy when you were subsequently informed of the digoxin levels, was it then a matter that you considered at that time was a case that should be ---

A. I had discounted that level as being in error, or an artefact, and it was my opinion that the death of this child was still explainable on natural causes.

Q. Doctor, one final matter. Did anyone suggest to you in the Hospital that the death of Janice Estrella had been reported to the Coroner at any stage during your involvement with the case?

A. Not prior to completing the report with Dr. Mancer, but subsequently I heard he was in discussion with the Coroner about the case.

Q. But during the course of the autopsy itself and prior to completion of the final



1
2 autopsy report that was a matter that was never raised
3 with you?

17 A. That is right.

4 MS. CRONK: Mr. Registrar, may I see
5 the Doctor's Curriculum Vitae?

6 Q. Doctor, as you know, I was
7 provided with this this morning and I have undertaken
8 to my friends to provide copies for them and we will
9 do so at the mid-afternoon break. For the benefit
10 of the record I note that under the presentation
11 section of your Curriculum Vitae, Item No. 2 indicates
12 that you participated in a presentation along with
13 Dr. Seccombe, and Dr. Pudek, am I pronouncing that
correctly?

14 A. Yes, Pudek.

15 Q. Drs. Whitfield and Jacobson at
16 the University of British Columbia, concerning the
17 subject "Digoxin-like Immunoreactivity in Pre-
18 mature and Full Term Infants not receiving Digoxin".
19 I take it that was a joint conquest on clinical
20 chemistry in Quebec in June of this year?

21 A. That is correct, the main
22 authors were Pudek and Seccombe.

23 Q. Doctor, we have had introduced
24 in evidence before the Commissioner a copy of a letter
25



Taylor, dr.ex.
(Cronk)

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2 to the Editor of the New England Journal of Medicine
3 entitled "Digoxin-Like Immunoreactivity in Pre-
4 mature and Full Term Infants not receiving Digoxin
5 Therapy", a title identical to the title of the
6 Congress in which you participated. Could you look
7 at this letter to the Editor, it is Exhibit 8, and
8 tell me whether you have seen it before?

8 A. Yes I have read this letter.

18 9 Q. Did you participate, Dr.

10 Taylor in the study that was undertaken by Dr. Seccombe
11 and his associate which resulted in that letter to the
12 Editor?

12 A. I participated in obtaining
13 specimens for their study, yes.

14 Q. Other than the obtaining
15 of specimens, did you have any involvement in the
16 study which resulted in that letter to the Editor?

17 A. I didn't participate in the
18 actual writing of the letter.

19 Q. I am sorry, I wasn't directing
20 my mind to the letter to the Editor; but other than
21 the collecting of the specimens themselves, did you
22 have any further involvement in the study itself?

22 A. I was asked a few questions
23 because of my experience at Sick Kids, and that's all.

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It was mainly totally involved in obtaining the specimens at autopsy.

Q. And when you say obtaining the specimens, I take it you are referring to the taking of the samples at autopsy?

A. Yes.

Q. On which assays were then run?

A. That is right.

Q. I was curious as to why a pathologist might be involved in that process, because we have heard Dr. Seccombe's study had to do with the study of neonates, young living infants who were not receiving digoxin?

A. There were two arms to that study; one was to identify in living infants the presence of the substance; and the second arm, which is what I was involved in, was to identify the source of that substance, and tissue specimens were required for that purpose and autopsy is the only convenient way to get those tissue samples, that was the arm that I was involved in and that is why I am a minor author in the presentation and not an author in the New England Journal Report.

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Q. After the samples had been taken, Doctor, and the assays run, did you participate in the analysis of the study results?

A. No.

Q. Or in the compilation of the study results themselves?

A. No.

Q. Can you tell me then what your role was at the Congress in Quebec in June of this year?

A. I had no role in the Congress. My name was attached to the presentation as a contributor to the study and my contribution was obtaining the specimens and documenting certain clinical information available from the chart when the child died.

Q. Thank you, Doctor.

I have no further questions of this witness, Mr. Commissioner.

THE COMMISSIONER: Yes, thank you. Mr. Roland, have you some property in this witness?

MR. ROLAND: Yes.

EXAMINATION BY MR. ROLAND:

Q. Dr. Taylor, you have told us about a telephone call that you had with Dr. Freedom



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as a result of, as best as you can recall, a note to call him attached to the Estrella chart, is that right?

A. Yes.

Q. And I gather there is a sign as well in the autopsy room indicating that Dr. Freedom is to be called with respect to all autopsies of children with cardiac problems?

A. Yes.

Q. So that I gather in every such case and including the Estrella case Dr. Freedom would have been called by the pathologist performing the autopsy in any event?

A. He was supposed to be called, yes.

Q. Yes.

THE COMMISSIONER: Was he called just for problems or was he called as a matter of routine?

THE WITNESS: As a matter of routine as is my understanding.

MR. ROLAND: Q. And that is because of his cross appointment and his particular interest with respect to cardiology deaths?

A. Yes.

Q. Yes.



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3 THE COMMISSIONER: Does that mean,
4 if I could just follow that up, would that mean that
5 would be in every file to call Dr. Freedom?

6 THE WITNESS: In every congenital
7 heart case Dr. Freedom was supposed to be notified,
8 yes,

9 MR. ROLAND: Q. And that was before
10 the autopsy was performed, I take it?

11 A. Yes.

12 Q. And that is because he had at
13 the time, and still has it, a peculiar or
14 particular interest in an autopsy performed on a
15 child that died on the cardiology ward or with some
16 cardiac malformation?

17 A. Yes, he was the expert on the
18 morphology or the appearance of congenital heart
19 lesions, yes, and he wanted to give us some guidance
20 if necessary on all cases.

21 Q. And with respect to that
22 conversation itself, I think you told us that he
23 gave you a brief background of the child and told you
24 some of the clinical concerns?

25 A. Yes.

Q. And was it after you had had
that discussion with Dr. Freedom about the background



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of Baby Estrella and the clinical concerns that he
asked you to do a dig. level?

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A. Yes.

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Q. And was it something, and
perhaps you can't tell us, but did it appear to you
at the time that this was a request that was made
by Dr. Freedom really after the discussion you had
had with him about the clinical course of Baby
Estrella and an idea that came to him really after
that discussion or was it something that appeared to
you that he had planned to ask you in any event?

12

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A. My recollection was that he
just mentioned it, oh, by the way, can you take a
dig. level or something like that.

15

16

Q. Yes.

A. After the fact, after the
discussion of the case.

17

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Q. Yes, all right. And did you
give any reaction to him of that request?

19

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A. I asked him why he wanted blood
taken for a dig. level.

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Q. Was that something that appeared
to you to be somewhat unusual, even given what he had
told you about the clinical history of the child and
the course of the child with the problems they were



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having with digoxin levels?

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A. He didn't tell me the problems
that the child was having with digoxin levels until
I asked him why he wanted a digoxin level.

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Q. I see, all right. And even
with that explanation were you surprised at the
request for a digoxin level?

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A. Yes.

9

Q. And why is that?

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A. A lot of patients have, or

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there is often difficulty in maintaining adequate
therapeutic levels in patients who subsequently die. I
have never, in spite of all of those previous
experiences I have had, have been requested to do a
specific drug level post mortem. So, I recognize
that the clinicians may have had difficulty in their
therapeutic approach to the child but that was the
first time that I was ever requested after the fact
to obtain a specimen.

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Q. I take it at that stage you
really didn't have any experience with postmortem
digoxin levels?

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A. No.

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Q. And you didn't really know how
to interpret them if at all except by comparison to

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the knowledge you had of antemortem levels?

A. That's correct.

Q. Now, I gather in the normal course you take such a sample at the beginning of an autopsy rather than at the end of it?

A. Yes.

Q. And that is I gather because of the real possibility of obtaining a contaminated sample if you leave it to the end rather than taking it at the beginning.

A. Well, that is one consideration; the other consideration is that during the dissection blood vessels are cut and blood is lost. So, at the beginning of the autopsy the blood is still in the vessels and obtainable. Contamination is another consideration but I think the reason why most pathologists take specimens at the beginning of the autopsy is because the blood is available to take.

Q. And is it fair to say that you didn't think there was any particular or grave concern about digoxin levels to be found in a post-mortem sample and that's why you forgot to take it at the beginning?

A. There was no sense of urgency



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2 applied to the request for taking the specimen. It
3 seemed to me like something that was tagged on at
4 the end of the conversation and, to be frank, of
5 dubious concern to me at the time and during the
6 autopsy I got caught up in doing the actual procedure
7 and forgot.

8 Q. And then you have told us that
9 the autopsy itself took three or four hours, and I
10 gather during the course of that and in performing
11 the various things you do during autopsy, the fluids
12 of the body, blood and other fluids would tend to
congregate in the pelvic cavity.

13 A. They congregate at the most
14 low part of the body, which is the pelvic cavity
15 and abdominal cavity.

16 Q. Yes. So, those fluids I gather
17 would include blood and other body fluids?

18 A. Yes.

19 Q. I see. Now, after the
20 autopsy you have told us that the body is
stitched up, is it?

21 A. Yes.

22 Q. Yes, and then it is washed
23 down?

24 A. Yes.
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Q. And I gather that some of the fluid or water that is used to wash down the body may find its way into the body cavity as well?

A. Some, yes.

Q. And then I gather the baby is put in some sort of a carrier to be taken to the morgue?

A. It can either be placed in a carrier or taken on a cart if the body is too big for the carrier.

Q. Do you know which was done in this case?

A. I'm sorry, I don't.

Q. And at the end of the autopsy did there remain a fair amount of fluid in the body?

A. I can't recall specifically what was there before the body was stitched up and taken to the morgue.

Q. Yes, all right. In any event, when the body was reopened by you at the morgue, I gather there was a fair amount of fluid in the pelvic cavity?

A. I would say one or two ounces.

Q. Is that enough fluid that that



1
2 fluid be sort of sloshed around and touched the
3 various parts of the internal parts of the body as
4 it is being transported to the morgue?

5 A. Yes.

6 Q. I see. And during the autopsy
7 itself can you tell us what you do with respect to
8 the bowel?

9 A. That depends. Usually I tie
10 the bowel at the top end and at the bottom end
11 before cutting it.

12 Q. Yes.

13 A. Sometimes I may not, it depends
14 on the circumstances of the autopsy.

15 Q. Do you recall in this case
16 which you did?

17 A. I'm sorry, I can't recall if
18 I tied it or didn't tie it.

19 Q. In either case, is it fair to
20 say that some contaminants from the bowel may find
21 their way into the body cavity?

22 A. A small amount of contamination
23 if I tie it, perhaps a large amount if I didn't tie
24 it, yes.

25 Q. What about urine finding its
way into the pelvic cavity, is that possible during



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the autopsy?

A. That's possible, yes.

Q. How does that come about?

A. The outlet of the bladder is cut when the organs from the pelvis are removed and it is possible that some urine can spill out from that cut.

Q. And I gather you don't recall in this case whether that occurred or not?

A. I can't recall.

Q. No. Now, with respect to the sample taken from the leg vein, you have told us that Dr. Gillan raised the legs and forced his hand down the leg, or actually up the leg but in a downward direction.

A. Yes.

Q. Squeezing the muscles.

A. Yes.

Q. The calf and thigh muscles.

A. Yes.

Q. I gather that in doing that Dr. Gillan would also squeeze some edema fluid?

A. Yes.

Q. And is it possible that in the sample that you took from the vein or the two



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veins, one on each leg, that there was included
in that some edema fluid?

A. It is possible but I tried to
take precautions to minimize any contamination.

Q. And I gather that if some
edema fluid found its way into that sample, the
sample being very small, that might have a signifi-
cant effect on that sample?

A. It's possible, yes.

Q. Now, as well, you have told
us that the site at which you took the sample from
the leg vein, and you don't think you put the syringe
right into the vein?

A. That's correct.

Q. That's because the vein was
too small I gather?

A. That's correct.

Q. And at that site is it also
possible that there might have been some contamination
from the abdominal fluid?

A. There may have been but, again,
I tried to take precautions to minimize any contamina-
tion.

Q. Now, going back to the mixture
of fluids in the pelvic cavity, you have told us



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that there might have been some tissue fluid, certainly
some blood?

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A. Yes.

5

Q. Some water from washing down

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the body and other contaminants such as fecal matter
and urine.

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A. Yes.

8

Q. Any other contaminants that

9

were possible that you can think of?

10

A. Well, stomach content, if you

11

look at those being different from fecal matter.

12

Q. Yes.

13

A. That's possible, yes.

14

Q. Yes.

15

A. Cerebral spinal fluid is a

16

possibility because the vertebrae are opened up to
expose the spinal chord.

17

Q. Yes.

18

A. I guess that's about all I can

19

think of.

20

Q. And I gather when you got the

21

reading back of 72 at the time, you have told us that

22

you concluded that it was contaminated by some
artefact.

23

A. I concluded it was artefactually

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wrong.

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Q. Yes.

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A. And the reason most likely was
because of contamination.

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Q. And at that stage and until
the preliminary inquiry you didn't I gather turn your
mind specifically to whether or not the result of
what possible contamination there was would elevate,
that is, give a false elevated reading or a false
low reading.

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A. That's correct. The first
time the question was put to me and the first time
I thought about it was at the preliminary hearing.
I recognized it was contaminated and I didn't examine
the issue any more than that.

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Q. Although I gather because it
was a 72 reading which was very high, you assumed
at the time that it was a false elevated reading?

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A. Yes. I just didn't think of
which way it would go, it was just an out of line
number and I just discounted it, yes.

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Q. You also told us that as a
result of a death there may be peculiar alterations
to certain substances in the body and, in particular,
I gather that is so with respect to, for instance,
potassium?



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A. Yes.

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Q. And is it so with respect to

4

some other substances?

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A. Most substances change after

6

a death. There are elevations and decreases in

7

various substances, yes.

8

Q. Was that a consideration of

9

yours at the time you received the 72 reading?

10

A. Yes.

11

Q. So that you thought there might

12

be a false elevated reading for digoxin because of

13

A. I didn't specifically think

14

that there was a false elevation. I just recognized

15

the number as being extremely high and artefactually

16

distorted in some manner and I'm afraid I just didn't

17

think about it much after that.

18

Q. Now, you have told us that

19

you had this brief conversation with Dr. Freedom in

20

the cafeteria several days after you received this

21

A. Yes.

22

Q. And I gather that was just a

23

chance conversation with him?

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A. Yes.

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Q. You were satisfied at the time that it was a contaminated sample and I gather therefore you weren't going to yourself seek out Dr. Freedom to discuss it with him?

A. I had made no intentions of going to his office to tell him but since I saw him I thought I would tell him, since he was the one that asked me to do it.



Taylor
ex. (Roland)

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Q. And at that stage, I think you have indicated, you already discussed the sample result of 72 with other residents and you, together with their input, had concluded that it was a false reading because of the contamination?

A. Yes.

Q. This was not a conclusion you came to by yourself?

A. I came to the conclusion myself and it was confirmed by my colleagues, when I told them the number and explained the circumstances under which the specimen was obtained.

Q. And you have told us that this conversation you had with Dr. Freedom was a chance and casual one in the cafeteria, you mentioned.

A. It was a casual conversation, yes.

Q. You mentioned the sample result to him and he suggested to you that it would be an error or an artefact?

A. It had to be an error or an artefact, something like that.

Q. Did that then confirm your own conclusion that you had already reached?



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A. Yes. I just filed the report with the rest of the autopsy papers for the day that I would sign it out and I did not think about it any further after that.

Q. At the time that you completed the final autopsy report and after you had had your discussions with Dr. Mancer, did your conclusion remain the same; that is, that the sample was contaminated and that there was an adequate cause explained for the death of this child?

A. Yes. That was my personal feeling, at the time that I wrote up the initial draft, that the digoxin level that I obtained was not significant or not valid in that there were adequate reasons to explain the death of the child, and it was my feeling that death was due to natural causes.

Q. Did those conclusions that you arrived at change at all after you had your conversation or your meeting with Dr. Mancer?

A. When Dr. Mancer presented his revisions to the final report, we discussed it. I felt that there were sufficient natural causes to explain the death of the child even then, but



H3 1
2 relied on his expertise and experience in making
3 the final conclusion, which he wrote.

4 Q. So that I understand it,
5 if you could turn to page 12 of the Estrella chart,
6 which is Exhibit 91, in the last paragraph in
7 particular, that begins by referring to samples of
8 post mortem blood, and you have told us that you
9 obtained two samples; one from the leg and one from
10 the pelvic cavity. Thereafter, it has already
11 been pointed out to you that "samples" is stated
12 in the plural.

13 Are you telling us that thereafter,
14 really, "samples", as far as you understood,
15 should be in the singular?

16 A. At that time, I was not
17 really thinking about the blood sample.

18 Q. Yes.

19 A. I had marked the specimens
20 "A" and "B". The report came back with no
21 marking "A" and "B". I assumed that there was
22 insufficient blood from the leg veins to do the
23 test and that the results were generated on the
24 pelvic sample. The reason I took the pelvic sample
25 was because I had serious doubts about the amount
of specimen from leg veins I got; I seriously



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doubted whether or not they could measure anything out of it.

Q. So, when it talks about -- that last paragraph talks about contamination and digoxin levels. You thought, at the time, I gather, or understood at the time, there was only one sample that was being referred to?

A. I did not know for sure which sample they had measured. It was not indicated on the report "A" or "B". I assumed it was the pelvic sample.

The term "samples" was used because I took two samples, but I really did not distinguish which of those generated which number.

Q. And did it occur to you any time up to the completion of the final autopsy report that there was any possibility of any kind of wrongdoing at all with respect to Baby Estrella?

A. I never thought of it.

MR. ROLAND: Thank you. Those are all my questions.

THE COMMISSIONER: Miss Chown, is this one of your clients?

MS. CHOWN: Yes, he is.



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EXAMINATION BY MS. CHOWN:

Q. Dr. Taylor, I would like to follow up very briefly on some of the areas Mr. Roland explored with you.

You have told us that after receiving the results on the post mortem digoxin samples you had an immediate discussion with some fellow residents.

Can you assist us as to whether these were residents in Pathology?

A. They were all residents in Pathology, yes.

Q. And were they of your experience level, approximately?

A. Yes.

Q. Shortly after that, I think you said a few days later, you met Dr. Freedom and had this casual conversation that we have heard referred to?

A. Yes.

Q. Out of that conversation, he expressed his view that this result was likely the result of an error or an artefact?

A. That is my recollection, yes.



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Q. I think you stated this morning in answer to a question, to Miss Cronk, that you, after that conversation with Dr. Freedom, made no further efforts, first of all, to check further with the Biochemistry Department about this result?

A. That is correct.

Q. Would it be fair to say that you did not take that action because, in your view, the most likely explanation for the sample was the contamination or artefact explanation rather than an error?

A. Yes.

Q. And you had no further discussion with your colleagues in Pathology at that time, I think you indicated.

What was the reason for not proceeding further down that line of enquiry?

A. I'm sorry, not proceeding further with...?

Q. Having further discussion with other colleagues in Pathology at that time.

A. The impression I was given was for me to think about it or check it out and I had come to the conclusion, based on my review of the autopsy findings, that the child had died of



H7

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2 heart failure and pneumonia, and that the specimen
3 was contaminated. It was incredibly high, and I
4 did not think it needed to be pursued any further.
5 It was an aberrant lab result that did not fit
6 the other information that I had available.

7 In addition, I knew that I would
8 discuss it eventually when I signed the case out;
9 so. I did not perceive any urgency in dealing with
10 it right then. I thought it could wait until all
11 the information was available, all of the lab tests
12 were available, then I could discuss it with Dr.
13 Mancer.

14 Q. Did I understand you
15 to say this morning that, in fact, personally, you
16 took one further step in the investigation after your
17 discussion with Dr. Freedom, and that was simply to
18 go back and look at your findings once again?

19 A. Yes. I reviewed my
20 findings and came to the same conclusion that I had
21 before.

22 Q. All right.
23 You told us that you felt it would
24 be sufficient, given there was no apparent sense of
25 urgency, to delay any further discussion of this
matter until the final sign-out with Dr. Mancer?



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A. Yes.

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Q. Obviously, then, up to

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the final sign-out and your discussion with him in

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the first week of March, you had no direct dis-

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cussion with Dr. Mancer on this point?

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A. Not on that point, no.

8

Q, Is it your practice as a

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resident, doing an autopsy under the supervision of

10

a staff pathologist, at the time of discussing the

11

final draft, to bring all the information in your

12

possession to his attention?

13

A. Yes.

14

Q. Would the digoxin levels

15

that you are now aware of fall into that category

16

of being simply an additional piece of information

17

that you wish to put before him in your general

18

discussion?

19

A. Exactly, yes.

20

Q. Is it fair to say that

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the purpose of that is simply that, since you are

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doing the autopsy under his supervision, you

23

simply wish to double-check all the information that

24

you have either included or rejected in coming to

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your conclusions about the baby?

A. Yes.



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Q. You have told us about your conclusions with respect to the Estrella case and the fact that Dr. Mancer made some alterations with respect to describing the digoxin level and adding some portions to the last paragraph of the final autopsy report.

Do you recall at this point whether Dr. Mancer made any changes in your drafting of the first paragraph on page 12 in which you set out your view of the cause of death?

A. No. As far as I remember, he only annotated and changed the last paragraph.

MS. CHOWN: Thank you very much. Those are my questions.

THE COMMISSIONER: Thank you.

Mr. Brown.

CROSS-EXAMINATION BY MR. BROWN:

Q. Dr. Taylor, in response to a question put to you by Mr. Roland, I believe you said that, when you went to the morgue and re-opened the Estrella child, you noticed about one to two ounces of fluid in the cavity; is that correct?

A. Yes.

Q. It was from that fluid that you extracted the sample?



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A. Yes.

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Q. The fluid, I believe

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you said to Miss Cronk, was located in the lower
part of the pelvis?

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A. Yes.

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Q. In relation to the

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stomach, would that be in the area of the pelvis
furthest away from the stomach?

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A. Yes.

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Q. And the area from which

11

you took the sample of the fluid in the pelvic

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cavity, would that be considered part of the gastro-
intestinal tract?

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A. The gastrointestinal

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tract was removed during the course of the autopsy.

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At the completion of the autopsy, there is a free

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cavity from neck to pelvis; so that fluid that

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accumulates in the pelvis is just fluid that

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accumulates at the lowest point in the body. It can

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come from any site. It could come from above or
below.

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Q. And the material from

21

which you took the sample in the pelvic cavity

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was fluid? There was no coagulation of the material

23

that you could observe?

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A. It looked like fluid

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H11

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blood.

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Q. I believe, also in response to a question put to you by Miss Cronk, you said that you thought the blood in the cavity certainly was contaminated with ascitic fluid?

A. Yes.

Q. Is ascitic fluid something that you could observe with the naked eye and separate from the blood?

A. No.

Q. So, you would have no means of telling the quantity of ascitic fluid that would be contained in that sample?

A. I can give a rough guess but I cannot say for sure. The child had ascites at autopsy. I drained some of it; some of it was left in and some of it was mixed - that which was left in was mixed with whatever other fluids were present, but I cannot say for sure I know a maximum, that that was how much ascites I estimated initially.

Q. Is there a figure for that maximum?

A. I think I included it in my autopsy report. Yes, 50 mls, about an ounce and a half.



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find that?

THE COMMISSIONER: Where do we

THE WITNESS: Page 17, under

"18. c."

MR. BROWN: Q. And you are
referring there to the portion of the autopsy
report dealing with the peritoneal cavity?

A. Yes.

MR. BROWN: Thank you, doctor.
Those are all my questions.

THE COMMISSIONER: Thank you.

Which distinguished representative
of the Attorney General --

MR. STRATHY: If I may, Mr.
Commissioner, before my distinguished --

THE COMMISSIONER: Sorry, I forgot
about the distinguished other interests. Yes.

MR. STRATHY: Unless, of course,
he wants to go ahead. But I think now that I am on
my feet...

MR. MARSHALL: I do not want to
disturb the long-established order, Mr. Commissioner.

THE COMMISSIONER: No.

Mr. Strathy, with apologies, you
proceed.



H13

CROSS-EXAMINATION BY MR. STRATHY:

Q. Doctor, I take it, when you performed this autopsy which was only your second at The Hospital for Sick Children, you nevertheless considered it to be a routine autopsy?

A. Yes.

Q. And as far as you were concerned, there was nothing particularly out of the order about the case when you began?

A. Not at all.

Q. Except perhaps for the request by Dr. Freedom that you do a digoxin test or sample?

A. That is correct. Otherwise it was a routine autopsy.

Q. And judging/^{by}what you said about that request by Dr. Freedom, I take it that you have, in the past, had requests by clinicians that you take a particular sample of something?

A. Yes.

Q. In this particular case, obviously, you did not place a great deal of significance on that request?

A. That is correct. If the clinician wants something that is not routine, I



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would like to know why, and how significant the request is. Sometimes, a request is not significant or will not give any more information than can be gotten by other means, so I make it a habit of asking any physician why they want something out of the routine.

Q. Would it be fair to say that perhaps you felt Dr. Freedom had some sort of academic interest in the question or a passing interest in it?

A. The request was put to me, as I remember, as more of an off-the-cuff end of remark type of request, as if he had just thought "maybe we should check the dig. level".

Q. "It would be interesting to know" sort of thing?

A. Yes.

Q. Now, you testified that judging, I think, by your level of experience at the time, it likely would have taken you three or four hours to perform the autopsy?

A. Yes.

Q. Is that your best recollection today of how long it took?

A. Yes.

Q. Just out of interest,



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how long would it take you today to perform a similar sort of routine autopsy?

A. Probably two and-a-half to three hours.

Q. You mentioned the previous autopsies that you had done, and the figure I had is that you had done --

THE COMMISSIONER: I wish with experience that we could get faster, too. It does not always work that way in our profession.

MR. STRATHY: I am sure the Commissioner was speaking generally with that observation.

Q. Doctor, you mentioned that you had done 90 or 100 autopsies previously at the Vancouver General and 40 to 50 at the Toronto General and the Toronto Western, for a total of about 150.

How many of those would have been infants?

A. Approximately 30 that I did at the Vancouver General Hospital.

Q. Would I be right that none of the ones at Toronto General and Toronto Western were infants, or were any of them?



Taylor
cr.ex. (Strathy)

H16

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A. That is correct.

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Q. None of them were

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infants?

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A. There were a few still-

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born babies that I did at the Toronto General but
no liveborn babies.

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Q. You have testified here

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today that you gave evidence at the preliminary

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inquiry into the charges against Susan Nelles.

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Do you recall that?

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A. Yes.

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Q. Do you recall how long it

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was that you were in the witness box at that
preliminary hearing?

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A. I think it was less than

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half an hour. Twenty minutes; something like that.

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Q. Twenty minutes?

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A. I think so. I timed it

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to be about twenty minutes.

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Q. In that time - lawyers

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sometimes put a stopwatch on each other, too - but
your recollection was, I think, that you testified

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about this particular child, Estrella, but you

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also recall testifying about two babies called

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Cook and Miller?

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A. Yes.

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Q. Did you testify about

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those children because you participated in the
autopsies on those children?

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A. Yes.

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Q. In the case of Cook,

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did you actually do the autopsy yourself?

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A. Yes.

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Q. And in the case of Miller,

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did you do the autopsy yourself?

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A. Yes.

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Q. In both of those cases,

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were you requested to take samples with respect to
the blood of the children?

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A. Yes.

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Q. And that was so testing

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could be done for digoxin?

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A. That is correct.

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Q. Now, doctor, if I under-

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stand it, at a routine autopsy, when there is a

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request made or it is desired to take a sample of

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blood, the usual place is the inferior venal cava;
is that so?

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A. That is a convenient

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place and, therefore, it is a usual place, yes.

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Q. And that is actually a
vein leading into the heart?

A. A large vein leading into
the heart, yes.

Q. And it is the vein that
takes the blood into the heart; is that so?

A. It is one of the two
that takes blood into the heart, yes.

Q. There is also the superior
vena cava?

A. That's correct.

Q. That is presumably just
in the location of the heart, is it?

A. Yes, just immediately
below the heart, the inferior vena cava.

Q. When you do that in a
routine autopsy, do you do it from outside the
body or within the body? Do you go at it from the
inside?



/DM/ak

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A. The organs are exposed so the
body has been cut open.

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Q. Is the reason you take blood
from that source is that there is a good deal of blood?

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A. Yes, it is a large vessel.

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Q. Now why then in this particular
case did you choose a leg vein rather than the
inferior vena cava, to take blood?

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A. As I mentioned I forget all
about the blood sample for digoxin when I was doing
the autopsy, and when I remembered the organs had
been removed, the blood vessels had been cut, the
blood had been spilled out and the only site that
I thought I could obtain a clean specimen of blood
would be the leg veins.

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Q. Was it your view then when you
went back that there would be no blood in the
inferior vena cava?

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A. The inferior vena cava wasn't
there.

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Q. I see, it had been removed?

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A. Yes.

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Q. That is a good reason then why
you didn't take a sample.

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We have also heard sometimes that blood



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is taken from the sagittal sinus in babies.

A. Yes.

Q. Is there any reason why you didn't take it from that sample?

A. At that time it was not my usual habit to take blood from that site. My usual habit was to take it from the inferior vena cava.

Q. So I take it you didn't even attempt the sagittal sinus?

A. Well, the brain had been removed to be examined, all the blood vessels had been cut and the blood had been drained out there wouldn't have been any blood there.

Q. All right, fair enough. When you went back to the morgue, I think you testified that one of the things you did was actually open up the body?

A. Yes.

Q. To remove the stitches presumably?

A. Yes.

Q. Did you do that before or after you obtained the leg sample?

A. I had to open up the body to obtain the leg sample.



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I.3

Q. So you actually opened up an incision in the leg, did you?

A. No, I opened up the incision in the main part of the body in the abdomen and chest to get at the pelvic site that I was interested in.

Q. So the site that you sampled then was actually inside the body?

A. That is correct.

Q. Where the leg vein comes into the pelvic area?

A. That is right.

Q. Now, do you recall which veins it was that you took it from in the leg? I know there are several veins in the leg.

A. I went to the largest veins which were the femoral veins.

Q. Yes.

A. Right and left side.

Q. That is the right and left leg you mean?

A. Yes.

Q. As I understand it there are two femoral veins, the proximal and the distal in each leg.



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A. It would be the proximal.

Q. And which is the proximal?

A. That is the one closest to the pelvis, the distal is deeper and further down the leg. The distal or deeper femoral enters into the main femoral. So I was going for the cut surface of the vein after the confluence of the other leg veins, all the leg, the venous return of the legs would pass through that cut femoral vein and that is why I went specifically for that.

Q. So that I know then, the vein that you took it from was the proximal femoral vein?

A. Yes, as it entered the pelvis.

Q. In each leg?

A. In each leg.

Q. You testified, Doctor, that the concern that you had at the time was whether or not there would be enough blood?

A. Yes.

Q. For a proper testing?

A. Yes.

Q. But I certainly don't recall hearing how much blood you did take in that particular sample.

A. It was less than 1 ml, I can't



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say for sure how much less, but it was less than
1 ml.

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Q. Can you put an ml for us in
relation to an ounce?

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A. About 1/30th of an ounce.

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Q. Did you have an understanding
of how much was generally required for testing
purposes?

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A. For a radioimmunoassay I knew
not very much was required, that is why I submitted
that sample to them for testing, but I had doubts
about it being enough.

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Q. Did you have in your mind any
sort of standard measure of how much one would try
to take for a digoxin level?

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A. I don't^{know}/the minimum amount
that is required for the assay, but the usual amount
that is drawn for a digoxin specimen is a couple of
mls, 3 or 4.

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Q. A couple of ml's?

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A. Ml's, yes.

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Q. Now the level that came back
on that leg sample, which we now know was 4.7, or
greater than 4.7, excuse me, we have heard that that
really can mean that it is 5, or it can mean that it

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I.5



I.6

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is 50, is that your understanding?

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A. That is my understanding.

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Q. And was it your understanding

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at the time, that is did you know that at the time

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too?

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A. Yes.

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Q. But I take it that that 4.7

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alone really wasn't much help to you in telling you
about digoxin levels in that child?

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A. No. I knew that a dilution

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report would be coming eventually, so I didn't pay

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much attention to that number.

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THE COMMISSIONER: Actually I don't

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think that is right, I don't think, I may be wrong.

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When they say greater than 4.7 that means it is

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greater but they can't do anything about it, they

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can't tell you, I may be wrong, but the way it

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appears --

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MR. STRATHY: Well, with respect,

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Mr. Commissioner, I think what we see in many of

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the cases is there is an initial report that says
greater than 4.7, and another one might come along

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say greater than 9.4 and so forth.

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THE COMMISSIONER: Sometimes that

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happens.

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I.7

MR. STRATHY: Only if there is
enough samples to carry on.

THE WITNESS: That was my interpreta-
tion of it.

THE COMMISSIONER: I guess you are
right.

MR. STRATHY: Q. Doctor, at that
time when you first heard the 4.7 level, were you
aware that levels of digoxin increased post mortem?

A. I wasn't specifically aware
that they increased post mortem, no.

Q. But you were aware that other
substances in the body may increase post mortem?

A. Or decrease, yes.

Q. There may be changes post
mortem?

A. Yes, almost all substances
change after death.

Q. Was it something that was in
your head that when you heard that 4.7 level that
possibly it simply could reflect changes post mortem?

A. I don't think I specifically
made that thought, but I knew that postmortem values
don't have the same meaning as antemortem values.

Q. In any event, you determined



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to wait until you had an indication of what the actual level was?

A. Yes.

Q. Let me ask you this then about the sample that you took from the pelvic cavity. Is that something that is referred to as the gutter, or gutter blood?

A. Yes.

Q. Have you heard that expression?

A. Yes. The abdominal gutters on either side of the back of the body and the pelvic gutter, referring to a depression in the body cavity.

Q. And that is actually called the pelvic gutter, is it?

A. That is how I referred to it, yes.

Q. And the substances that accumulate there at the time of autopsy, let us say post mortem, is that sometimes referred to as gutter blood?

A. I don't use that particular term, but I could agree with that statement, yes.

Q. Do you have a term that you would apply to the collection of substances in that



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pelvic gutter?

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A. Contaminated.

4

Q. Contaminated.

5

A. I don't have a specific term.

6

Q. Now you told Ms. Cronk, and

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I think it was clear in your evidence, that you viewed that, whatever it was in that pelvic cavity, you felt that there were a number of possible contaminants in that location?

9

10

A. Yes.

11

Q. And that the sample of whatever liquid you took from that area may well have been contaminated?

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A. Yes.

15

Q. Just so that we know in the

16

future what it is that you feel contaminated that sample, I want to ask you a few questions to clarify that.

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A. Okay.

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Q. Now first of all you mentioned edema fluid.

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A. Yes.

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Q. Is edema fluid the fluid

between tissues?

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A. It is the excess amount of

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I.9



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I.10

fluid between tissues, yes.

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Q. And you mentioned that this

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child had evidence of an excess of that sort of

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fluid?

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A. She had edema, yes.

7

Q. Edema is a condition, is it?

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A. Yes.

9

Q. Does it result in sort of a

puffiness of the tissues?

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A. Yes.

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Q. Now how does that edema fluid

12

get into the gutter?

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A. It leaks from cut surfaces,

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and it can be expressed if pressure is applied to

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tissues, certainly during the course of handling the

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body in the autopsy pressure is applied to tissues

so it will be squeezed out of the tissues.

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Q. And would those come out of

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all sorts of different tissues?

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A. Yes.

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Q. Or any tissues in particular?

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A. Usually edema refers to the

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collection of fluid in the subcutaneous tissues, but

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it is present in all fluids in a child with heart

failure so it could come from all sorts of tissues.

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Q. I am sorry, it is present in
all tissues in a child?

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A. In a child with severe heart
failure.

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Q. And then that edema fluid may
also flow into that location as a result of tissues
being cut?

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A. Yes.

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Q. And the cutting is obviously
something you do in the course of the autopsy?

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A. Yes.

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Q. You cut tissues to remove -
well, I suppose you cut tissues when you make the
initial incisions?

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A. Yes.

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Q. And you also cut tissues when
you remove organs from the body?

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A. That is correct.

18

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Q. Do you cut tissues for any
other reason?

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A. In order to examine an internal
structure you have to cut the tissues. So if the
pathologist is interested in examining any internal
structure tissues will have to be cut to get at that
structure.

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I.12

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Q. So in any event any one of those cuttings can result in an excess of tissue, excuse me, an excess of that edema fluid going into the gutter?

A. Yes.

THE COMMISSIONER: The edema itself is an excess of fluid, is it not?

THE WITNESS: That is correct.

THE COMMISSIONER: So you wouldn't have an excess of an excess of fluid, it is just the excess fluid.

THE WITNESS: It is the excess fluid, yes.

THE COMMISSIONER: I know this is not convenient, but do you have one or two questions on this issue?

MR. STRATHY: I have finished with edema fluid so this might be a good time to break.

THE COMMISSIONER: It is just as well, we will rise then until 2:30.

MS. CRONK: Excuse me, Mr. Commissioner.

THE COMMISSIONER: Yes?

MS. CRONK: Could we have an approximation from counsel as to how long they expect



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to be?

MR. STRATHY: I don't know at this stage, I am sorry.

THE COMMISSIONER: That is not a good start then.

MR. STRATHY: I think I will be another half hour.

THE COMMISSIONER: Mr. Marshall?

MR. MARSHALL: 10 minutes, 15 minutes.

THE COMMISSIONER: Mr. Young?

MR. YOUNG: 15 to 20 minutes, Mr. Commissioner.

THE COMMISSIONER: Miss Kitley?

MS. KITELY: 10 minutes perhaps.

MS. JACKMAN: No more than 10 minutes.

MR. OLAH: About that also, Mr. Commissioner.

MR. LABOW: I would say about 15 minutes, Mr. Chairman.

MR. SHANAHAN: I may have no questions.

THE COMMISSIONER: Oh, we might make it, we might make it today.

MS. CRONK: Thank you, sir.

THE COMMISSIONER: We can't promise. So, all right, 2:30.

---Luncheon recess.



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---On resuming at 2:30 p.m.

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THE COMMISSIONER: Yes, Mr. Strathy.

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MR. STRATHY: Q. Doctor, we were reviewing the things that in your view may have contaminated this sample which you took from the gutter blood of Baby Estrella. We had just discussed edema fluid being the first potential contaminant. The next thing that you mentioned was ascitic fluid. Can you tell us what ascitic fluid is?

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A. It is the fluid that accumulates in the abdominal space, the space in which the abdominal organs are contained.

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Q. Is that something that accumulates during life as well?

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Q. So, I take it that it is present during life where there is congestive heart failure?

A. Yes.

Q. I gather you testified that you observed some of that fluid at the time of post mortem?

A. Yes.

Q. So, that substance was yet another



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potential contaminant?

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A. Yes.

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Q. And then you mentioned the ---

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THE COMMISSIONER: The abdominal,
what did you say?

6

THE WITNESS: Space, the space in which
the organs are contained.

8

THE COMMISSIONER: Is it a-s-c-i-t-i-c
or is it a-c-e-t-i-c?

9

10

THE WITNESS: Ascitic, a-s-c-i-t-i-c.

11

THE COMMISSIONER: Well, it doesn't
follow just from that spelling that it should be
ascitic, but if you say so I will accept it.

12

13

THE WITNESS: The pronunciation is
variable I think.

14

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MR. STRATHY: Q. Just so that I
will complicate it a bit, is that the same as
ascites?

16

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A. Ascites?

18

Q. Yes.

19

A. Yes.

20

Q. You had better spell that for
us too.

21

22

A. A-s-c-i-t-e-s.

23

Q. And then the third thing that

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I have, Doctor, is fecal matter from the bowel, is
that right?

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A. Yes.

5

6

Q . And you mentioned that you
might have a small quantity of that if you had tied
off the bowel before removing it, is that right?

7

A. Yes.

8

9

Q . That simply would fall into
the gutter at the time of removing the bowel?

10

A. Yes.

11

12

Q. And if you had not tied off
the bowel there might be considerably more?

13

A. Yes.

14

15

Q. And your recollection today
is that you can't recall whether you tied off the
bowel or not?

16

A. That's right.

17

18

Q. And you have no way of telling
us based on the autopsy report whether you did so or
not?

19

A. No.

20

21

22

Q. I take it it is your view
however that the effect of that fecal matter going into
the gutter would be to potentially elevate the level
of digoxin in the gutter?

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A. That's my understanding now,
yes.

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Q. And you say it is your under-
standing now. When did it become your understanding?

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A. In the past year or so with
the information that I obtained from some of my
colleagues and from some of the things that I read.

7

8

Q. Was it part of your information
at the time that you gave evidence at the preliminary
hearing?

10

11

A. I don't think so.

12

13

14

Q. Well, just so I'm clear as to
the process then. Is the theory that the child is
receiving oral digoxin medication and that in the
course of digesting that medication digoxin substances
are passed through the bowel?

15

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17

A. I don't think it is necessary
to confine the medication to an oral route, I think
that it is possible that it can be secreted into the
bowel even if it was given by an intravenous route.

18

19

20

Q. Either way, the effect would
be that the child on digoxin medication would have
digoxin in its bowel contents?

21

22

A. Yes.

23

Q. And that those contents if

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25



1
2 leaked into the gutter would have the effect of
3 increasing the digoxin level?

4 A. Yes.

5 THE COMMISSIONER: But is it the
6 gutter - you said the abdominal space. The gutter I
7 thought was the lowest part.

8 THE WITNESS: I'm sorry, the abdominal,
9 the peritoneal cavity or abdominal space is an
10 anatomical structure that exists in life. The gutter
11 is the cavity that remains after the dissection has
12 been done.

13 THE COMMISSIONER: Yes.

14 MR. STRATHY: Q. Well, whatever it
15 is, it is your understanding that the bowel contents
16 may physically appear in the gutter?

17 A. Yes.

18 Q. And they may contaminate whatever
19 else is in the gutter?

20 A. Yes.

21 Q. And that the effect of that
22 contamination may be to increase the digoxin level of
23 the fluid that is in the gutter?

24 A. Yes.

25 Q. Now, the next thing that you
mentioned, the fourth factor was urine. I gather that



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may take place when you remove the bladder that urine
may leak into this gutter?

3

A. Yes.

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Q. And we have heard that when
digoxin is administered to a patient and as it works
its way through the body that it passes out in the
urine, is that your understanding?

8

A. Yes.

9

10

Q. And that you may well have
digoxin or its metabolites in the patient's urine?

11

A. Yes.

12

13

14

Q. And is it your understanding
that the effect of this leaking of urine into the
gutter at the time of post mortem may be to cause an
increased amount of digoxin in the gutter?

15

A. I can't answer that question.

16

17

Q. Is it simply your understanding
however that this may be some form of contamination
of the gutter?

18

A. Yes.

19

20

Q. And were you aware of that at
the time you gave evidence at the preliminary inquiry?

21

22

A. That the urine contained
metabolites or digoxin, yes.

23

Q. Yes. And were you aware of the

24

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possibility that the sample may have been contaminated
with urine?

3

4

A. Yes.

5

6

Q. Now, the next thing that I
have that you mentioned was the stomach contents as
a potential contaminant. Is that so?

7

A. A potential contaminant, yes.

8

9

Q. And is the stomach removed or
cut at the time of the postmortem examination?

10

11

A. Yes, it is usually removed
without opening inside the body.

12

13

Q. Can you explain how the stomach
contents may find their way or part of them may find
their way into the gutter?

14

15

16

A. During the course of
dissection there may be an accidental cut of the
stomach and cause some spillage in the stomach contents.

17

18

Q. Is that something which happens
in your experience?

19

A. Frequently, yes.

20

Q. So that some of the contents
of the stomach will be spilled into the gutter?

21

A. Could be, yes.

22

23

Q. And is it your understanding
that that could result in a contamination of digoxin

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in the gutter?

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A. I don't think I can answer that

4

question. It would certainly contaminate whatever

5

fluid is in the gutter.

6

Q. But you can't answer us as

7

to what the effect as concerns the digoxin would be?

8

A. If there was an oral dose

9

given just at the time the child died then I would

10

expect an increased level in the gutter, increased
level of digoxin in the gutter.

11

Q. Then you mentioned that the

12

next thing is blood in the gutter. You may find blood
in the gutter?

13

A. Yes.

14

Q. How does that get into the

15

gutter?

16

A. During the dissection numerous

17

blood vessels are cut and blood leaks out of those

18

cut vessels and drains into the lowest part of the

19

body cavity.

20

Q. Would I be right that blood

21

would not usually, at least during life, be found in
the gutter?

22

A. It is an abnormal finding in

23

life, yes.

24

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Taylor, cr.ex.
(Strathy)

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Q. In life.

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THE COMMISSIONER: I am sorry, I thought that was what you were taking out of the gutter was blood, isn't it?

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THE WITNESS: Yes, I was. But it is not found in life normally.

7

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THE COMMISSIONER: Well, no, but how could it contaminate - the blood is what you're testing, isn't it, and you are worried about how it contaminates.

11

THE WITNESS: I'm sorry, yes.

12

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THE COMMISSIONER: How could the blood that you are taking out contaminate itself?

14

THE WITNESS: You're right it can't, I am sorry.

15

16

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MR. STRATHY: Q. But what you are finding in the gutter is not normally occurring blood, is it?

18

19

A. It is blood that is not found normally in life, correct.

20

21

Q. In life. And it leaks in there or flows in there during the autopsy itself?

22

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A. That's right.

THE COMMISSIONER: I can understand that it can be contaminated, I just can't understand



1
2 how it can contaminate nothing because there is
3 nothing there to contaminate.

10
4 MR. STRATHY: Well, I was just going
5 through, I suppose I should have been more specific.
6 He mentioned the things that he finds in the gutter
7 or the things that may be there in the gutter. What
8 you were trying to do was get a sample of blood and
9 you went to the gutter?

10 A. Yes.

11 Q. And all you are telling us
12 is that there are a number of things that may have
13 contaminated that sample, so, it wasn't pure blood?

14 A. That is correct.

15 Q. And then lastly, Doctor, I
16 have a spinal fluid as something that may have gone
17 into the gutter?

18 A. Possibly, yes.

19 Q. I wasn't clear as to how that
20 would take place.

21 A. To examine the spinal cord the
22 usual routine is to remove the vertebrae or the bones
23 of the backbone and as those bones are removed the
24 spinal fluid is spilt from the canal.

25 Q. And do you know what effect
if any that would have on the digoxin level in the



11 1
2 gutter?

3 A. I don't know.

4 Q. Doctor, at the time when
5 you first received the digoxin level of 72 nanograms
6 per millilitre, I gather from your evidence you have
7 real concerns as to what that meant, for, among other
8 things, you were concerned that that sample may have
9 been contaminated?

10 A. Yes.

11 Q. May I suggest to you that
12 if you thought that was an accurate level in the
13 sense that it was an accurate pre-mortem level, you
14 would have been very concerned?

15 A. If I had obtained a clean
16 specimen of blood at the start of the autopsy from
17 the inferior vena cava, I would have been concerned
18 about that level, yes.

19 Q. If it showed 72 nanograms
20 per millilitre?

21 A. Yes.

22 Q. But given the sample that you
23 had, Doctor, and that you did obtain, I suggest to
24 you that if at the time you had thought that was
25 an uncontaminated sample you would have been very
concerned?



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A. If I felt that it was a clean sample without contamination, yes, I would have been more concerned.

Q. And you would have done something about it, obviously?

A. I would have done something, yes.

Q. And I suggest to you the reason you were not particularly concerned at the time was you thought it was contaminated for all the reasons that you've mentioned?

A. Yes.

Q. And I further suggest to you that what you thought was that the actual level of digoxin in the blood of that child, if there was any digoxin, was substantially less than what you observed?

A. I assumed it was but I really didn't think too much about whether it was actually higher or actually lower, I just recognized it as a contaminated specimen, therefore, probably not significant.

Q. Well, if you thought it was actually higher than 72, surely you would have been even more concerned?

A. Yes.



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Q. So, is it not reasonable to conclude that you thought it was less than 72?

3

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A. Yes, though, I didn't specifically think that thought, I must assume that subconsciously that is how I approached it, yes.

5

6

7

Q. So, you viewed that contamination as something that would artificially elevate a digoxin level?

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A. Following that logic, yes, but again I didn't specifically think about it one way or the other. I considered it a contaminated specimen and therefore not reliable.

12

13

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Q. And looking back at it from today, Doctor, with the benefit of hindsight, would it not be fair to conclude further that that sample was contaminated?

15

16

A. Yes.

17

Q. Is that not your view today?

18

A. Yes.

19

Q. Again for all the reasons that you have mentioned?

20

A. Yes.

21

Q. Are you able to assist us as to in what way it was contaminated?

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A. Based on the amount of

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information that I have, which is not a lot, I would think that the number was artificially higher than the true antemortem blood level.

Q. So that level of 72 that we see on the digoxin printouts in your view is artificially high?

A. Based on the information I have now, yes.

Q. On what you know today?

A. Yes.

Q. All right. Now, Doctor, I would like to refer you if I may to the evidence that you gave at the preliminary inquiry before His Honour Judge Vanek. I say at the outset, Doctor, that I recognize that at the time you were only in the witness stand for 20 minutes and you perhaps may not have been asked the detailed questions that you have been asked this morning.

If I can refer you however to Volume 17 of the evidence of the preliminary inquiry.

THE COMMISSIONER: I have a little problem with this. If it is to support something that he says you should ask him first; if it is to contradict something that he said then I hope you may ask the preliminary question.

Why are you referring him. I would



1
2 much rather hear from him his recollection now and if
3 that doesn't coincide with the preliminary inquiry
4 then go on to the preliminary inquiry. Do you follow
5 what I am saying?

6 MR. STRATHY: Yes I do, and I think I
7 have laid the groundwork for it, Mr. Commissioner. I
8 have his evidence on a certain point, I would like to
9 continue.

10 THE COMMISSIONER: Well, is there
11 something different in the preliminary inquiry?

12 MR. STRATHY: Yes, that is the only
13 reason I would be referring to it.

14 THE COMMISSIONER: Oh, all right.

15 MR. STRATHY: I think it will speak
16 for itself.

17 THE COMMISSIONER: Yes, all right.

18 MR. STRATHY: You may not agree when
19 you see it but I hope you do.

20 THE COMMISSIONER: Yes, all right.

21 MR. STRATHY: It is Volume 17. Do
22 you have a copy, Doctor?

23 A. Yes.

24 Q. The page I would like to
25 refer you to is page 113.

A. Yes.



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Q. At the bottom of the page you
were asked by Mr. McGee:

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"All right. So, you obtained one
sample from the leg and one from the
cavity below the stomach?

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A. Yes.

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Q. Would either of those exhibits
be contaminated in any way to your
knowledge?

14

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A. Yes. The pelvic sample was
most likely contaminated with edema
fluid from the tissues and from ascites
fluid from the cavity itself.

17

18

19

Q. All right. And when you say
contaminated, I use the phrase
contaminated, would that mean
diluted or what?

20

21

A. The blood would be diluted
by these fluids, yes.

Q. Diluted by these fluids?

22

23

24

25

A. Yes."

Now, do you recall giving that

evidence, Doctor, at the preliminary?

A. Yes.

Q. And would you not agree with



1
2 me first of all that you did not mention at the
3 preliminary inquiry as potential contaminants some
4 of the things that you have mentioned to us today,
5 for example, fecal matter and urine?

17 A. Yes, I would agree with that.

6 Q. And was that because you were
7 not fully aware of their potential effects as
8 contaminants?

9 A. I was aware of them at that
10 time. I just didn't mention them in my testimony,
11 I didn't think of them at the time of my testimony.

12 Q. And in looking back at your
13 testimony at the time, would you not agree with me
14 that if you were attempting to be as thorough as
possible you would have mentioned it?

15 A. Yes.

16 Q. And would you not also agree
17 with me that from your answer, and it is perhaps a
18 little unfair because the word "diluted" was put, as
19 it were, in your mouth by Mr. McGee when he put the
20 question to you, but is it not fair to suggest that
21 your answer leaves one with the impression that the
22 levels would actually have been higher than they were
observed today?

23 A. That answer does, yes.
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Q. And presumably looking back on your answer, Doctor, with the benefit of hindsight and in light of what you told us today, would you not agree that that answer should be qualified by saying that the possibility was that the levels could have actually been lower than 72?

A. The answer should have been 'lower, higher, I'm not sure'.

Q. Fair enough. Now, Doctor, if I may refer you to your final autopsy report. I don't have the exhibit in front of me, Mr. Commissioner.

THE COMMISSIONER: I almost know it by heart.

MR. STRATHY: It is Exhibit 91, Doctor. Do you have that in front of you?

A. I have the Estrella witness copy, yes.

Q. Page 12.

A. Yes.

Q. Just referring to the last sentence on that page where it says:

"This level is markedly elevated over the normal therapeutic range and if accurate would explain the death of the patient."



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2 Was it Dr. Mancer, did you say, who
3 put that sentence in?

4 A. Yes.

5 Q. And that was not your sentence?

6 A. That was not my sentence,
7 no.

8 Q. But I suppose you would agree
9 with it in the sense that if that level of 72 was
10 the actual pre-mortem level in the child, that would
11 explain the death?

12 A. Yes, if it was an antemortem
13 level, yes.

14 THE COMMISSIONER: I don't know, I
15 would like a pharmacologist to tell me, but if that
16 were the pre-mortem level I don't think the child would
17 be alive.

18 MR. STRATHY: That's what I am saying
19 to him, if it was - if 72 was the pre-mortem level
20 and accurately reflected the pre-mortem level that
21 would explain the death, wouldn't it?

22 A. It would be a very good cause
23 for the death of this child, yes.

24 Q. And may I suggest to you,
25 however, that there is a big question mark in your
mind as to the accuracy of that sample?



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A. Yes.

3

Q. So, it is a pretty big if
when we say if accurate?

4

A. Yes.

5

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Q. And I assume from what you
have told us about contamination that that is
something which to your mind at least should be kept
in mind in questioning the accuracy of that sample?

8

9

A. Yes.

10

MR. STRATHY: Thank you.

11

THE COMMISSIONER: Thank you, Mr.
Strathy. Mr. Marshall.

12

MR. MARSHALL: Thank you, Mr.

13

Commissioner.

14

CROSS-EXAMINATION BY MR. MARSHALL:

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Doctor, just with respect to your
answers to my friend Mr. Strathy just now about the
qualification implicit in the final paragraph of the
final autopsy report as it appears on page 12 in
Exhibit 91. I take it that before you signed that
report you were, and I think others have asked you
this, you were aware of that paragraph, you had
reviewed that paragraph?

22

A. Yes.

23

Q. So that I take it that you

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accept that paragraph as accurately stating your opinions held at that time about the significance or possible significance of those levels of digoxin?

A. The conclusions were drawn up in collaboration with Dr. Mancer. He had more influence on that statement than me and I signed the autopsy report with that in mind, yes.

Q. I understand. But it is clear I take it that by signing that report you accept that statement as accurately reflecting your views held by you at that time?

A. Yes.

Q. Thank you. Now, the autopsy was performed by you as I understand it on the 11th of January, 1981?

A. Yes.

Q. Can you tell me a little bit about how these autopsies are assigned to pathologists. How would you first become aware of the need to conduct an autopsy in this particular case?

A. On that weekend, the weekend of the 10th and the 11th I was the resident carrying the call pager for the Department of Pathology and my duties were to attend any autopsies that had come up on the weekend. It was a rotation and it was my



1
2 turn in the rotation.

3 Q. So, for that day, you would
4 be the one that would be informed of a particular
5 death and of the need to conduct an autopsy?

6 A. Yes.

7 Q. And you indicated that to the
8 best of your recollection probably - I shouldn't
9 say probably - the document
10 itself indicates that the autopsy was conducted about
22 2:30 in the afternoon?

11 A. Yes.

12 Q. When would you have been
13 informed, again to the best of your recollection, of
14 the death of Baby Estrella?

15 A. I can't state for certain.
16 I was in in the morning to do another autopsy and
17 I don't know whether or not in the morning I was aware
18 of Estrella or whether the Estrella autopsy consent
19 and chart came to me later on, I don't know.
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Q. When you say in the morning,
could we come to some sort of general understanding
that it would not be before 9 o'clock in the morning?

A. It would not be before 9 o'clock.

Q. So there would be no telephoning
to you at night to advise, for example, the death of
a child?

A. No.

Q. You indicated that when you
arrived, and at some point you would be informed that
there was an autopsy to be performed on Baby Estrella,
you did review the chart for this child?

A. Yes.

Q. And would that include the drug
administration record?

A. I usually glance at that, yes.

Q. Do you have any recollection of
making any observation following that examination in
this case?

A. I made no note of any drug
values of medication prescribed the child.

Q. Do you have any recollection of
noting from your review of the chart any apparent
concern or apparent variability in the therapeutic
digoxin treatment given to the child?



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A. On my initial reading of the

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chart I made no note of that.

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Q. Had you reviewed the chart, to

5

the best of your recollection, before you spoke to

6

Dr. Freedom?

7

A. Yes.

8

Q. While we are not sure, it was

9

later on in the morning to the best of your

10

recollection when you spoke to the doctor?

11

A. I cannot remember for sure. I

12

think it would be after I completed the first autopsy
so that would put it late morning or early afternoon.

13

Q. Can you recall whether at that

14

time Dr. Freedom knew that the child was dead?

15

A. Yes.

16

Q. And you discussed with him, did

17

you, or he discussed with you some concern about the

18

course of digoxin therapy, as far as this child was
concerned?

19

A. Briefly, yes.

20

Q. Do you recall what he indicated?

21

A. He requested at the end of our

22

brief discussion of the case that I obtain a digoxin

23

sample. I asked him why. He said they had had

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problems and there was some concern about controlling

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the level therapeutically in the child, or words to that effect. I accepted that answer and promptly forgot to take the specimen.

Q. If he was, that is Dr. Freedom, aware at that time that the child was dead, what purpose would be served, at that point, can you tell me, in carrying out an analysis of samples of blood to determine blood levels of digoxin?

A. The reason why I asked him was in part because I could not see any good reason to do it.

THE COMMISSIONER: You could not see - is that what you said?

THE WITNESS: It was not something that I had done before. I had been faced with patients on digoxin before in which there had been difficulties in controlling levels, and I had never been requested to take a postmortem digoxin level, so it was something out of the ordinary for me.

MR. MARSHALL: Q. Would it explain that concern if digoxin toxicity, as having potential involvement in the death, was what was in mind?

A. If that was what was in mind, yes, but that was never mentioned to me.

Q. Can you think of any other



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reason for such a request being made, knowing that the child was deceased?

A. No.

Q. The discussion that we have had this morning indicates the reports that you have received following upon your taking of the samples and submitting them for analysis, and we have in the chart at pages 156 and 158, I think you identified the analytical results of the analysis of the two samples that you have described at some length. Is that right?

A. Yes.

Q. On page 156, we have the analytical result of one of the tests on the sample from the body cavity, and if I look at page 157, do I understand that that is a repeat of the analysis from a specimen that you collected on the 11th of January?

A. I guess so. I can only recall receiving one report, sorry, two reports, the greater than 4.7 and the one report of 72.

Q. It would appear, would you agree with me, that we have under the same specimen number at pages 156 and 157 of the chart two analyses of the same specimen?

A. Except that the dates are



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different, yes.

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Q. Yes, the dates are quite different. Would that not suggest to you that what was conducted by the laboratory at the hospital was a repeat analysis of the specimen?

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A. I cannot answer that. I would assume that they did repeat the analysis, yes. I cannot say for sure.

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Q. I think in fact that is so, Mr. Commissioner. It was dealt with I think in Exhibit 45 of the Preliminary Inquiry at page 3 where the two samples were discussed with Dr. Rowe.

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You would accept that explanation, would you, that there was repeat analysis of that sample?

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A. Yes.

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Q. And you would expect, would you, whether you now recall it or not, you would have received this printout as well as the one appearing at page 157?

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A. I would expect that if they sent a repeat analysis report to the physician that requested the test that I would receive that copy, yes.

Q. Assuming that that is correct,



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that there was a repeat carried out with respect to that sample, and I have heard nothing to the contrary said by you, and perhaps you can assist me if I am wrong, did you have any reason at the time that these results, whether you received the 157 or not, but certainly 156 and 158, came to your attention, did you have any reason to doubt that the testing methodology in the laboratory was properly applied?

A. No. I am familiar with the radioimmunoassay technique and I appreciate that is a sensitive and accurate method.

Q. But you had no reason to believe at the time that there was any testing error in the laboratory?

A. No.

Q. I take it you had no reason at the time then to doubt that whatever contaminants may be in the fluid that was tested that reading of 72 nanograms per millilitre accurately reflected the level of digoxin in the substance under test?

A. In the substance I was testing, yes.

Q. You had no reason to doubt that?

A. I did not doubt that, no.

Q. I take it now you have no reason



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to doubt the accuracy of that testing?

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A. I have no reason to doubt that,
no.

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Q. I take it as a matter of
certainty that even now you do not feel confident in
expressing any opinion as to whether or not the
contaminants that you have described indeed were
present in this fluid at the time of sampling?

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A. I do not.

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Q. You have expressed the
possibility that contamination could occur in a number
of ways?

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A. Yes.

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Q. You do not know for a fact that
it did?

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A. I did not separate^{out} the specific
fluids, no, but I am certain that there was contami-
nation present.

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Q. You do not know, if I understand
the examination conducted by my friend, whether or not
that contamination would artificially increase or
decrease the real result?

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A. I do not know that now, no.

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Q. Do I understand that at the time
these readings came to your attention you did not

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consider whether any contamination that might be present would have led to an artificially high reading or indeed an artificially low reading?

A. I appreciated the fact that the specimen was contaminated and that the result that I received was not valid. I did not consider whether the result would be increased or decreased over what the antemortem blood level was. I just recognized it as a contaminated specimen and therefore not probably a valid number.

Q. My question was, you did not carry the reasoning process beyond simply concluding that there was a possibility of contamination?

A. That is correct.

Q. You did not go further than that?

A. I did not go further than that at that time, no.

Q. At some point, do I understand that you did give some thought to that, that is, at some point prior to the conclusion of the Preliminary Inquiry, and concluded that in all probability the contamination would have resulted in an artificially low evaluation?

A. The first time I actually thought of that specific question was at the Preliminary Hearing



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and that was my immediate response to the examiner at that time.

Q. So that when you did get to think of the ramifications of the contamination, your conclusion was that 72 nanograms per millilitre was lower than what you would expect to truly reflect the level of digoxin?

A. That was my conclusion at the Preliminary Hearing, subsequently modified.

Q. At the time that these results were reported to you, do I understand it that you simply concluded that there was some contamination but did not entertain any consideration as to what effect that would have on the reading?

A. As I mentioned, I did not consider whether it would elevate or decrease the true reading, that is correct.

Q. Just so that I am clear, your reason for dismissing that test report at that time, Doctor, was what?

A. There were two main reasons: one, the findings at autopsy were consistent with the child dying from natural causes and, two, the specimen was contaminated and the number yielded was completely out of line with anything that I had



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experience with - three reasons, I guess.

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THE COMMISSIONER: Sorry, that is just two. What was the third one?

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THE WITNESS: The high value of the number, I think, threw me off as well, sir.

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THE COMMISSIONER: I thought that is what you are now saying. The high number, does that mean inaccuracy, because I thought you were now telling us that you did not think it was inaccurate, you merely thought it was contaminated and therefore unreliable?

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THE WITNESS: I do not think that the testing procedure was inaccurate. I just did not know what to make of such a high number. My immediate conclusion, based on the things I have told you, was that it was wrong, period.

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MR. MARSHALL: Q. But it was not wrong because of any lab error?

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A. From my knowledge of the testing procedure, I would think that that is a low likelihood.

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Q. So you were faced with a reading in the sample that you submitted for analysis of 72 nanograms per millilitre which was far in excess of anything you had ever encountered in your experience

BB 10



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before?

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A. Yes.

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Q. And instead of pursuing some

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explanation for that number in definitive terms, am

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I correct in simply saying that you dismissed it

7

simply because of the size of it?

7

A. In part I filed it with the rest

8

of the information that I had obtained in the autopsy,

9

to go over it with my staff pathologist at the time

10

that the autopsy was completed. I did not take any

11

definitive steps to uncover the meaning of that number

12

at that time.

13

Q. Do you have any knowledge or

14

information as to whether anyone else was engaged in

15

taking steps to uncover the meaning of that number?

16

A. I do not, sir.

17

MR. MARSHALL: Thank you, Doctor.

18

THE COMMISSIONER: Yes. Mr. Young?

19

MR. YOUNG: Thank you, Commissioner.

CROSS-EXAMINATION BY MR. YOUNG:

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Q. Doctor, with respect to Baby

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Estrella, when you opened up the body when you returned -

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I guess it was to the morgue, is that right, subsequent

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to the autopsy?

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A. Yes.

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Q. You opened up the body. Can you tell me whether or not there were all the organs of this child in the body?

A. I cannot remember for sure.

Q. Do you remember if any of the organs were in the body?

A. I cannot recall that either.

Q. Correct me if I am wrong but I believe you told Mr. Roland and Mr. Brown that there was one to two ounces of fluid in the body?

A. Yes.

Q. You recall that?

A. Yes.

Q. Do you recall whether that fluid was easily observed?

A. Yes, it was easily observed. It looked like blood.

Q. After you finish a standard autopsy on a child, do you usually replace all of the organs? Do you put them back in the body?

A. I personally do, now. At that time I followed the procedure of the staff pathologist, if I knew it. Some would replace the organs, some would not.

Q. In this particular instance, who



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was the staff pathologist?

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A. Dr. Mancer.

4

Q. What is his procedure?

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A. His procedure, as far as I know,
is to replace the organs.

6

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Q. On the same point, Doctor, earlier
Mr. Roland I believe used the term "sloshing around"
with respect to what would happen inside the body as it
was transported from the room that you performed the
autopsy in to the morgue.

10

11

A. Yes.

12

Q. Mr. Lamek has earlier suggested
that his impression - this is to another witness, I
should say - his impression of the word slosh or
sloshing is to have a great amount of waves to be back
and forth and the mixing of a good deal of fluid.

15

16

Would you suggest that that is what
likely happened in this instance?

17

18

A. I would not perhaps use that
word but certainly there was mixing of what fluid was
present in the cavity of the body, yes.

19

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Q. And you have previously told us
that there was one to two ounces of fluid in the
specific area that you were looking at?

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A. Yes.

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Q. So there would be mixing of that.
What would it mix with, Doctor?

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A. Whatever fluids were present in
the body cavity, the edema fluid that was pressed out
or wept out from the tissues, the ascites, the other
fluid that I mentioned, in addition to probably some
tap water that was used to wash the body at the
completion of the autopsy.

9

10

Q. And any organs or tissues that
happened to be in the body?

11

12

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A. The usual custom, if the organs
are to be returned to the body, is to place them in a
plastic bag and seal the bag.

14

Q. Each organ placed in its own
bag?

15

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A. No, put into a large bag, all
of them.

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Q. Doctor, I wonder if we might move
on to a number of other children, two children, that
you also were involved with.

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Mr. Strathy brought out the fact that
you performed the autopsy I believe on Baby Miller and
on Baby Cook. Is that correct?

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A. Yes.

Q. And I believe that the autopsy



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on Baby Miller, could you help me, Doctor, when was that performed?

A. Well, just allow me to look at my notes. Baby Miller was performed on the 21st of March.

Q. Were you given any, what I might call unusual or out of the ordinary instructions, with respect to what you should do during this autopsy?

A. Prior to starting the autopsy I was requested to obtain a blood sample for digoxin.

Q. Who requested you to do that?

A. My recollection is that it was Dr. Costigan, one of the fellows on the cardiology ward.

Q. This morning you told us when Dr. Freedom requested you to take a blood sample for a digoxin assay with respect to Baby Estrella that you questioned that because it was an unusual request. Did you do the same in this instance?

A. No, I did not. I was made aware of the concern about digoxin values in children from that ward and I obtained the specimen on the basis of that.

Q. You had a conversation with Dr. Costigan. Can you help me with what time of day that conversation would likely have taken place?



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A. I started the autopsy, it looks like about 9:30. I would have talked to him before starting the autopsy after arriving, which would have been between 8:00 and 8:30 or some time between 8:30 and 9:30 I assume I spoke with him.

Q. Just to be clear, this is a.m., this is in the morning, is it not?

A. a.m., yes.

Q. Doctor, you may have already told me this, can you be as specific as possible with respect to what instructions you received from Dr. Costigan?

A. I am sorry, I can't, I was asked to obtain a specimen, according to my notes here I did ask him why, and he stated that there was some concern about a possible overdose causing or contributing to the death of the infant.

Q. And he specifically referred to a digoxin overdose?

A. That is my recollection, yes.

Q. Doctor, you took a blood sample, or you may have actually taken more than one blood sample, in order to fulfill Dr. Costigan's request, is that correct?

A. Yes.



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Q. How many blood samples did you take?

A. I can't recall, I don't have that in my notes, I would have to review the autopsy report to sort that one out.

Q. Would it be fair to say, Doctor, that whatever blood samples you did take you took in a usual or preferred manner?

A. I took in the preferred manner which was from the interior vena cava of this patient.

Q. I said preferred, because earlier today, and indeed through much of this morning we heard about a secondary or less than optimum method of taking a blood sample. You didn't have those sort of concerns in this case, this is where you prefer to take a sample from, if you have the option?

A. Yes.

Q. Once again, Doctor, that was from the ---

A. The inferior vena cava.

Q. And Doctor, what did you do with the samples once you took them?

A. Again I don't have all that



1
2 material in front of me. If I recall I obtained the
3 specimens and I gave them to the autopsy assistant
4 who then labelled the tubes appropriately and
5 completed the requisitions and he took the specimens
6 to biochemistry.

7 Q. Do you recall his name,
8 Doctor?

9 A. It was Dr. Don Perrin.

10 Q. Was there anyone else present
11 through this autopsy?

12 A. Dr. Cutz.

13 Q. Was he present throughout the
14 autopsy from start to finish?

15 A. I don't know if he was there
16 for 100 per cent of the time, but for a substantial
17 portion of the time, yes.

18 Q. Did you receive the results
19 back from those blood samples, did you receive the
20 results of the digoxin assays?

21 A. I personally did not receive
22 those results. The first time that I was made aware
23 of them was when I brought the microscopic slides
24 and my initial impressions to Dr. Cutz for the
25 signing-out procedure formulating diagnoses and
coming to conclusions.



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Q. And when was that, Doctor?

A. This autopsy was done much faster than the usual academic teaching hospital autopsy. I don't have a copy of the completed report, so I can't give you a specific date.

Q. I think we might be able to supply you with that, Exhibit 115, I believe, page 52, the final autopsy report appears, I don't know if that will be of any assistance to you or not.

A. I am sorry, which page was that again?

Q. Page 52, there is also the number 22 just below it, but I think 52 is the order that it is in.

A. Yes. Well, I can't see a sign-out date on this report. It was within a few weeks, within two weeks, but I can't recall exactly, it may have been a bit longer, it may have been a bit faster.

Q. And I see your signature, that is your signature is it?

A. Yes.

Q. On the bottom of page 52?

A. Yes.

Q. And Dr. Cutz signed that as well?



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A. Yes.

Q. And when you did receive the results back, do you recall what the results were, offhand?

A. Again I was made aware of the results by Dr. Cutz at the time I signed out.

Q. I understand.

A. But I can't recall what they are now. I would have to check.

Q. I believe that was 78 in this particular instance, 78 nanograms per millilitre?

A. I will accept your word for that.

Q. You won't defer to me though, we have had trouble with that word before.

Doctor, do you recall any discussion with Dr. Cutz about that particular level that you got back, the 78?

A. Yes. I don't recall a specific conversation, I am afraid you will have to ask a bit more direct question than that. Do you mean, did we discuss its meaning?

Q. All right, let's start with that.

A. Yes, we did discuss that level.



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Q. And do you recall what your opinion was with respect to that level?

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A. I considered the specimen minimally contaminated, as minimally contaminated as it could be gotten, and therefore that value, most of it, as far as I was concerned at that time probably accurately reflected an antemortem level.

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Q. And had you previously had any dealings with the exception of Estrella, with antemortem levels of that ---

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A. No.

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Q. Do you recall what Dr. Cutz' reaction was to that particular level?

A. I believe it was similar to mine.

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Q. And in fact, Doctor, on page 52 of Baby Miller's hospital record, I see you list, the very top line there underneath the "Vital Statistics", about the child: "Digoxin toxicity congenital heart disease".

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A. Yes.

Q. Am I right in that that is what you believe to be the cause of death of that child?

A. Yes.



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Q. Is it one or the other, or is it possible it could be either, or did you have any suspicion that it might be one more than the other, can you help me with that?

A. You mean the specific cause of death in this child?

Q. Yes.

A. At this time we believed it was digoxin toxicity.

Q. Doctor, if we could move on to the next occasion that you were requested to take a blood sample for a digoxin assay.

A. Yes.

Q. I believe that was the following day, is that correct?

A. Yes.

Q. And that was on Baby Cook?

A. Yes.

Q. Who requested you to take that specific blood sample?

A. Excuse me for a minute?

Q. Sure.

A. According to my notes, Dr. Cutz requested that I take that specimen.

Q. And once again, Doctor, I will



1
2 ask you to be as specific as you can. Do you
3 recall any specific reason that Dr. Cutz requested
4 this blood sample be taken?

5 A. He mentioned to me that there
6 was a potential medical/legal problem with the case.

7 Q. Did he tell you anything else?

8 A. I am not sure if he mentioned
9 specifically that digoxin overdose was suspected or
10 not, but that digoxin played a factor in the death
11 of the child.

12 Q. And he asked you to take the
13 sample?

14 A. Yes.

15 Q. And do you recall how you
16 took the specific sample, Doctor?

17 A. I obtained that specimen as
18 well from the inferior vena cava immediately after
19 opening the chest.

20 Q. And what did you do with that
21 blood?

22 A. This blood I gave to Dr. Cutz,
23 who then completed the requisitions submitted - I'm
24 not exactly sure of the sequence of events, but I
25 know that some blood went to the Forensic Sciences
building carried by his own hand, some blood went to



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the Biochemistry Department at Sick Children's.

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Q. Before we get to the results of those blood tests, Doctor; I wonder if you could help us with this. Dr. Mancer I believe described the atmosphere or the milieu in the Hospital around that period, during that weekend, as being one that was, and these are my own words, but I perceived it as a tense, as a stressful time. Did you too perceive such a stressful time?

A. I knew that something out of the ordinary was going on, yes.

Q. Did you know that it had something to do with digoxin, potential digoxin intoxication?

A. With Justin Cook, yes.

Q. Doctor, when - did you see the results back from the blood samples that you took for Baby Cook?

A. Again the results went back to Dr. Cutz, and I was not made aware of the results until it came time to review the microscopic slides in the final diagnosis with Dr. Cutz.

Q. Can you help me with what day that might have been?

A. I would have to see if there is



1
2 a sign-out date on the autopsy report. Again, I can't
3 remember, I know these autopsies were completed as
4 quickly as possible, so it would have been within
5 a couple of weeks.

6 Q. Doctor, if this might assist
7 you, this is Exhibit 116, page 44 I believe the
8 final autopsy report appears. I don't see a date
9 on that.

10 A. I don't see a date either.

11 Q. Once again that is your
12 signature at the bottom?

13 A. That is my signature.

14 Q. Beside Dr. Cutz' signature?

15 A. Yes.

16 Q. Do you recall what results
17 you were informed of on the date that we can't
18 pinpoint right now?

19 A. I don't think I was given a
20 specific number, only told that it was high. At
21 that time residents were disconnected from the events.
22 The events were being handled mainly by the senior
23 staff to try to remove the residents from any further
24 responsibility on that. So I was not specifically
25 aware of a number in this case.

Q. I see. But you did contribute



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to the final autopsy report?

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A. Yes.

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Q. And in fact signed it?

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A. Yes.

6

Q. I see once again at the top

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of page 44 you list digoxin toxicity as the cause of
death, is that correct?

8

A. Yes.

9

MR. YOUNG: Mr. Commissioner, I only
have a few more questions, I am cognizant of the time.

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THE COMMISSIONER: Which would you

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prefer?

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MR. YOUNG: I would prefer to finish
up.

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THE COMMISSIONER: Yes, all right.

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MR. YOUNG: Q. Doctor, before you

16

conducted the tests on the - the digoxin tests on

17

Baby - well, that is not fair, before you took the

18

blood sample for a digoxin test on Baby Estrella, had

19

you previously taken such a blood sample for a

20

digoxin assay?

21

A. No.

22

Q. Subsequent to that test I

23

believe you told me that the next blood test that

24

you took for that purpose would be Baby Miller?

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A. That is correct.

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Q. And then subsequent to that

4

Baby Cook, the following day?

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A. That is correct.

6

Q. Have you since taking the blood

7

tests during the autopsy of Baby Cook, taken any

8

further blood samples for digoxin assay?

9

A. I have but only in the context

10

of the study that I was involved in at the B.C.

Children's Hospital.

11

THE COMMISSIONER: I am sorry, when

12

did you come off - I thought they were routine after

13

this at the Hospital for Sick Children?

14

THE WITNESS: I am not sure when that

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policy was instituted, it may have been instituted

16

when I was there.

17

MR. YOUNG: Q. At any rate, you didn't

take them?

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A. If it was routine I took them,

19

but I can't recall taking them.

20

THE COMMISSIONER: I thought they

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were routine after that weekend, but perhaps I am

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wrong.

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MR. YOUNG: Q. Doctor, you were at

the Hospital though until June of 1981, were you not?

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A. Yes.

THE COMMISSIONER: They are not routine any place else that you have been?

THE WITNESS: Not any place else that I have been, no.

MR. YOUNG: Q. Doctor, I notice on at least two of the autopsies that we have examined, on the autopsy reports, and this would be Cook and Miller, you have listed the cause of death as digoxin toxicity. In fact there is a last sentence in the last paragraph, I believe on the Estrella chart that infers that digoxin may have played a role in the death of this child, or in fact that if the result was accurate that may have been a factor in this child's death, is that correct?

A. Yes.

Q. Have you since, and I am talking after the autopsy report that you completed on Baby Cook, have you had any occasion to list digoxin toxicity as a cause of death.

THE COMMISSIONER: In which, in any other case?

MR. YOUNG: Q. We can do it in two stages. Let's speak of up until June, 1981, with any other infant that you autopsied subsequent to



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Baby Cook?

A. No.

Q. You haven't?

A. No.

Q. And have you, in your
experience in Vancouver, since June of 1981, had
occasion to list digoxin toxicity as a cause of
death?

A. No.

MR. YOUNG: I have no other questions.
Thank you, Mr. Commissioner.

THE COMMISSIONER: Thank you. We
will take 15 minutes.
---Short recess.



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--- on resuming.

THE COMMISSIONER: Yes, Miss
Kitley.

CROSS-EXAMINATION BY MS. KITELY:

Q. Dr. Taylor, did I understand you to say this morning that you thought that Dr. Freedom had eventually reviewed the Estrella heart with you?

A. Yes.

Q. Is there anything in your notes that would lead you to believe that that did happen or is that just conjecture?

A. I didn't note a date on which the heart was reviewed but at that time the procedure was for Dr. Freedom to review the gross findings in all cases of congenital heart disease and I believe he did so in this case; I can't say when.

Q. When you say that he reviewed the heart with you, does that mean that he actually did the heart dissection and you were with him?

A. I can't recall. He did not do the actual heart dissection, he examined the specimen after the autopsy was performed.



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Q. And would that have been after the preliminary, the gross findings and before the final?

A. It would have been before the final. I can't comment on its relationship to the preliminary.

Q. Would it have been before or after you knew the Estrella level of digoxin?

A. It would have been before. It would have been within a couple of days of the autopsy at the most.

Q. So, that would not have been an opportunity for you to discuss that with Dr. Freedom?

A. No.

Q. Now, we have been through several times page 12 in the Estrella exhibit book and the change that was made on the last sentence which you attributed to Dr. Mancer.

THE COMMISSIONER: I am not too sure it was a change in the last sentence, it is a change in the last paragraph of the addition of the last sentence.

MS. KITLEY: That's right.

Q. The last sentence, I think,



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Doctor, you were quite clear was Dr. Mancer's
authorship.

A. Yes.

Q. Did you ask him why he
did that?

A. Well, I knew he was
puzzled or concerned about that level and it was
his conclusion, or he felt that that sentence should
be added because of his concern I believe.

Q. Did you actually discuss
that with him after you did the draft final autopsy
report or is this conjecture on your part?

A. No, I remember him saying
that he was adding the sentence and that just
because he had some concerns about that number.

Q. So, when Mr. Marshall
put to you earlier that by putting your signature
on this document you accepted that statement, is that
because you accepted it out of a respect for your
superior or because you actually believed in that
sentence?

A. I accepted it because he
was my superior.

Q. You really had no choice?

A. Well, I suppose if I



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objected strongly I could have refused to sign the autopsy but I had no reason to object strongly. It was his feeling and I acquiesced because he was my superior. I didn't have the strong objection to that statement.

Q. Dealing with the Miller death. I understood you to say earlier that with respect to the level of 78 nanograms you considered it minimally contaminated and therefore probably accurately reflected an ante mortem level.

A. That was my feeling at the time that the autopsy was completed, yes.

Q. And would you agree with me that you are not a specialist in what happens to digoxin after death?

A. Yes.

Q. That a pharmacologist is the one who is better able to make an opinion as to whether that level probably accurately reflected an ante mortem level?

A. I appreciate that now, yes.

Q. And if the 78 nanograms did not accurately reflect the ante mortem level, is there enough other conclusions in the Miller



1
2 autopsy report for you to justify death?

3 A. If there was no digoxin level,
4 either other findings sufficient to account for the
5 death of this child?

6 Q. Yes.

7 A. I believe so. I think that
8 she had very severe blood vessel disease in her
9 lungs caused from her heart problem and she had
10 evidence of congestive heart failure and I think
11 together those two things in a sick child could
12 account for death.

13 Q. Now, I understood this
14 morning when you gave evidence that you talked about
15 the Estrella level being either a lab error or an
16 artefact and then later this afternoon you were
17 questioned about again lab error or artefact. Was
18 your reference this morning to a lab error a quote
19 of Dr. Freedom's and not your own?

20 A. I can't remember in that
21 conversation which of us said that. It might have
22 been either or both of us that said that.

23 Q. But as I understood you to
24 say this afternoon that you never had any problem
25 in the confidence in the RIA.

A. Yes. I could have mentioned



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that it was a lab error but that it would have been a very low probability. My main thinking at the time was that it was a contaminated sample and thus the reason to question its validity, but I could have mentioned lab error.

Q. And you have indicated that since you left the Hospital you have taken some samples for digoxin testing, and I gather that is in connection with Dr. Seccombe's test?

A. Yes.

Q. And have you finished taking all of those samples?

A. No, the study is still ongoing.

Q. Am I correct that all you are participating in is taking the samples, not in writing the report?

A. I obtained the specimens and add some clinical information based on my review of the chart. I am not involved in the analysis of the specimen or the interpretation of the results from those specimens.

Q. Do you have any idea how far along Dr. Seccombe is with his study and when his conclusions might be available?

A. I'm sorry I can't answer that.



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I know that he is currently attempting to analyze a back log of specimens and asked me not to take any more for the time being, so, it is the only information I have on his progress.

MS. KITLEY: Thank you, those are all my questions.

THE COMMISSIONER: Thank you.
Miss Jackman?

CROSS-EXAMINATION BY MS. JACKMAN:

Q. Doctor, Mr. Strathy asked you earlier about your testimony in the preliminary inquiry, that you had only mentioned in that testimony that you had given the edema fluid and the ascitic fluid as being possible contaminants. You stated today that you would include other contaminants as possibly being there as well, is that correct?

A. If I was asked to make as complete a list as possible I would add things, yes.

Q. So, would that hold as well for the final autopsy report? On page 12 of that report it is stated that the samples were contaminated slightly by edema fluid and ascitic fluid. Would you also today if you were writing that report add in other contaminants?

A. Yes.



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Q. Now, Doctor, I have a couple of other questions about that final autopsy report. I note that in brackets in that last paragraph it's got toxic range 2.0 to 9.0 nanograms per millilitre of blood.

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A. Yes.

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Q. What does toxic range mean to you?

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A. That is the serum or blood level range at which toxic effects of the medication or agent can be expected to occur.

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Q. Can you recall if it was you who put that in there or if that was Dr. Mancer?

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A. I can recall both of us checking available textbooks to see what the textbook values for the toxic range were and I can't recall if it was my specific hand that wrote that or Dr. Mancer's. I know that we both looked at it.

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Q. Doctor, would it be fair to say that when you are talking about toxic range you are talking about effects, not necessarily death?

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A. Yes. We were referring to the range at which one might start to see the cardiac rhythm disturbances associated with digoxin.

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Q. Now, Doctor, you had a discussion



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with Dr. Mancer at the time of the signing out of
the final autopsy report?

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A. Yes.

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Q. And at that time you talked
to him about how you obtained the samples on the
Estrella baby.

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A. Yes.

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Q. Did you have any subsequent
conversation with Dr. Mancer about how you obtained
the samples?

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A. He subsequently asked me to
go over the procedure that I used, yes.

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Q. Can you recall when that took
place?

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A. I'm not sure of the exact
chronology there. I don't know the circumstances
under which he asked me that again, but I have
discussed that. I understand that there was an
effort to try to duplicate the result or the
circumstances under which I took those specimens and
I think that was the context in which he talked to me.

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Q. Was that before you left the
Hospital?

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A. No, after I left the Hospital.

Q. So, like, was it at the time



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that he was doing that duplication study in August of
1982?

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A. Shortly before he started I

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believe.

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Q. And how did you have this

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discussion with him, by phone or did you see him in
person?

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A. No, he called me in Vancouver.

9

Q. Doctor, would it be fair to

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say as well that with respect to the effect or the
significance of contamination that that would vary
from child to child?

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A. I believe it would.

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Q. And that that would vary as a

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result of what the child had taken in and the amount
of excretion prior to that?

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A. And the nature of its illness

17

and so on.

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Q. Now, Doctor, when Mr. Young

19

was asking you a question about where you took the

20

blood sample from in Justin Cook, you stated that

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you had taken it from the inferior vena cava?

22

A. Yes.

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Q. Are you certain of that, to

24

the best of your recollection?

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A. Yes.

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Q. Or is that just your assumption?

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A. No, I marked down the site

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that I took that blood. According to my notes it

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was from the inferior vena cava.

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Q. Did you have those notes with

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you at the preliminary?

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A. No.

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Q. Doctor, at the preliminary

inquiry, I believe it is page 127.

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THE COMMISSIONER: Which volume?

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MR. YOUNG: Volume 17, Mr. Commissioner.

13

MS. JACKMAN: Volume 17. This is

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the preliminary, the same testimony that Mr. Strathy

15

had asked you before about.

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THE COMMISSIONER: Well, can you not -

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I take it there is something different in the

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preliminary, is there?

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MS. JACKMAN: Yes, there is.

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THE COMMISSIONER: Well, could you

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not - it's the classical way but I put it to you

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that if you took it from the left big toe, or

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whatever you want to say, and then he says no, I did

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not and then you read the testimony. Isn't that what

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you are going to do? Give him a chance before...



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MS. JACKMAN: Well, Mr. Commissioner,
I did ask. He was asked in the preliminary ---

THE COMMISSIONER: And what did he
say in the preliminary?

MS. JACKMAN: --- where he had taken
the sample from and he said he couldn't recall.

THE COMMISSIONER: Oh, all right.

MS. JACKMAN: He assumed it was
from the inferior vena cava.

THE COMMISSIONER: Oh, I see.

THE WITNESS: Subsequently checking
my notes it turns out that I did take it from the
inferior vena cava.

MS. JACKMAN: That you did, okay.
Thank you, I won't read the question to him then.

THE COMMISSIONER: No, all right.

MS. JACKMAN: Q. Now, Doctor, when
you were taking the samples on Miller and Cook, can
you remember exactly when you took them in the
autopsy?

A. Early on in the autopsy after
the chest was opened before the abdominal organs
were disturbed or before the chest organs were
removed.

Q. Are you basing that on your



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standard practice in autopsies or from your personal recollection on those two autopsies?

A. Both.

Q. Doctor, if you were doing the autopsy today on Janice Estrella and you got the 72 nanogram result back, aside from the issue of contamination, would you find that level questionable?

A. That's a difficult question to answer. You mean if it was an uncontaminated blood sample from the inferior vena cava. You mean if I had of taken the specimen in the way that ---

Q. What I'm trying to get at is, aside from the level, aside from the question of contamination, whether or not it was contaminated, if you were the pathologist doing the autopsy, would it level some questions in your mind as to the accuracy of that level?

A. Today?

Q. Yes.

A. Yes.

Q. Today. Would that also be true in the case of Allana Miller?

A. Today, yes.

Q. And would that also be true with respect to postmortem levels in Justin Cook?



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A. Yes.

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Q. Now, Doctor, I just had one

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other question and, that was on both the Allana

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Miller and Justin Cook final autopsy reports. It

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states at the top, at the top of the first page

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Digoxin Toxicity and Congenital Heart Disease. Why

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does it state congenital heart disease on the same
line?

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A. Those are the two major

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diagnoses and they were relaying the child was on

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digoxin because the child had congenital heart disease.

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It is a summary title for the autopsy.

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Q. So, that is not specifically

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the cause of death?

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A. Death is related to those

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two entities, yes; digoxin toxicity being at that

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time what was thought to be the specific cause of

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death but the child was on digoxin because of

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congenital heart disease. That was the way to
try to tie the two together.

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MS. JACKMAN: Those are all the

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questions I have.

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THE COMMISSIONER: Yes, thank you.

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Mr. Olah?

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DD15

CROSS-EXAMINATION BY MR. OLAH:

Q. Doctor, there were a couple of things that puzzled me coming near the tail end of these examinations. First of all, when you talk about contamination you are not talking about contamination in the sense of digoxin contamination, you are talking about the contamination of serum or blood by other fluids or other kinds of bodily substances.

A. Yes.

Q. Because you really don't know what or what isn't or what level of digoxin is to be found in those other body serums?

A. That's correct.

Q. Would you expect digoxin, and I don't know if you know about this, to be found in ascitic fluid.

A. Since I would just have to speculate because I have never done any measurement for digoxin in ascitic fluid, but since it is a product of blood, a filtrative blood of sorts, then I would have no reason to suspect that digoxin would not be in ascitic fluid.

Q. I'm sorry, I don't follow that. You don't expect digoxin to be found in ---

A. There is no reason why it



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wouldn't be ---

Q. Why it would not?

A. That's correct.

Q. In other words, your belief today is that there may be digoxin, assuming digoxin was ingested by a child, in ascitic fluid?

A. I would expect that there would be but I don't have any proof of that, I have never seen any literature to that effect, and I have never done any specific measurements. I would expect that there would be digoxin in ascitic fluid.

Q. Now, ascitic fluid is fluid that is naturally found in the abdominal cavity, is it?

A. Most healthy people have a very small amount of fluid in the abdominal cavity which lubricates surfaces. In certain illnesses there is an accumulation of that fluid. That fluid is derived in part from filtration of the blood.

Q. Was there very substantial amounts of ascitic fluid in the Estrella case or was it minimal, do you recall?

A. There was 50 ml's or about an ounce and a half, which is a moderate amount of ascitic fluid for a child of this age.



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baby ingested orally digoxin, that is, was given digoxin by an oral administration, how long would it take before that digoxin has worked its way through the body and has been eliminated?

A. Well, I think you would have to appreciate that the digoxin would be probably totally absorbed from the child and then be re-excreted into the bowel as it circulates. I don't think it is a matter of it just sitting there and being passed along. I don't know the timing for that.

Q. Well, we do know that it gets into the blood stream and some of it lodges in the tissue but some of it is excreted also, is it not?

A. Yes.

Q. And most of these excretions take away or occurs by way of urine, does it not?

A. I haven't recently reviewed the pharmacology of digoxin but that is my understanding, yes.

Q. So that only very minimal amounts are excreted by way of the bowel, for example?

A. I can't comment on how much.

Q. Did you know in this case,



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Q. Thank you.

THE COMMISSIONER: Did you say a moderate amount?

THE WITNESS: Moderate.

THE COMMISSIONER: That means a healthy amount?

THE WITNESS: No, it was more than healthy.

THE COMMISSIONER: It was more than healthy.

THE WITNESS: It was more than was normally seen. It was considered to be an abnormal amount present.

MR. OLAH: Q. But you know of no information or literature that would correlate the level of digoxin in ascitic fluid and blood serum?

A. No.

Q. But from listening to you and your theorizing, would it in your opinion or, I don't know if you can assist us, would it be higher or lower than blood serum level?

A. I can't answer that.

Q. Now, you mentioned about excretion or elimination of digoxin. How long would it take, assume for a moment, Doctor, that a



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Doctor, that this child hadn't had digoxin for some four days?

A. When I reviewed the chart prior to starting the autopsy I looked briefly at the lab results but I didn't make a specific note of when the child received digoxin, when such a lab report was reported or any of the other specific chronology. I reviewed the chart to get an understanding of the clinical course of the child. So, I didn't make a specific note of when it received the drugs and when reports were issued and so on.

Q. Well, Doctor, you were told by Dr. Freedom, were you not, that digoxin was a specific concern here?

A. In an off the cuff manner, yes.

Q. And you say you didn't review the medication orders to see when the child had last received digoxin?

A. No, I didn't.

Q. Bearing in mind that the child had not had digoxin four days prior to its death, or that was the assumption, would you still expect digoxin to be found in the bowel?

A. Based on my knowledge now I would expect not, but I am not an expert on the excretion metabolism of digoxin.



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Q. So that if there was presence of excretion from the bowel because of a perforation, I do not know, can you assist us whether in your opinion that would alter the level of digoxin in the pelvic cavity, in your opinion, bearing in mind the absence of digoxin for four days?

A. If there was no digoxin given for four days, and I assume that there was no digoxin in the bowel ---

Q. You told us that you would not expect digoxin to be found in the bowel after that period of time?

A. No, I would not.

Q. Would you then expect that escape of bowel content material would affect the level of the digoxin in the pelvic fluid?

A. If there was no digoxin there and there was no other substance which could cross react with the test then I would not expect there would be any contamination from that source.

Q. Similarly, with the gastric contents, would you still expect digoxin to be found in the stomach after assuming no digoxin had been administered orally for four days?

A. For four days, no.



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Q. So if there was a rupture or a seepage from the stomach because of an accidental nick or cutting during the post mortem that again would not impact on the level of digoxin in the gutter blood?

A. I have to say again that I don't know the half life or the rate at which digoxin is cleared from the body but it is my understanding that it is cleared relatively quickly and therefore I would not expect to see any remnants of a dose given four days ago in the body.

Q. What about spinal fluid? Do you know if digoxin migrates into the spinal fluid?

A. No, I do not. The factor there which I do not have any knowledge of is the blood brain barrier and I do not know if digoxin crosses that barrier or not.

Q. I am sorry, what barrier is that?

A. The blood brain barrier which is a mechanism which selectively permits certain materials to cross between blood and cerebro spinal fluid. I do not know whether digoxin passes that barrier or not.

Q. Have you ever seen any literature



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3 2 that would assist us in that regard?

3 A. No.

4 Q. What about the urine? Would
5 you expect digoxin to be filtrated out in four days
6 or would you expect the urine to still demonstrate
7 some remnants of digoxin bearing in mind that there
8 is digoxin in the blood and it is being secreted out
over time?

9 A. Bearing in mind again that I
10 do not have a figure for the half life or the rate of
11 metabolism for digoxin, it is my belief that it is
12 relatively quickly metabolized and if the child is
13 voiding regularly, not having retention of urine for
14 some reason, I would expect there to be no digoxin
present in urine after four days.

15 Q. I would like to throw in one
16 more factor into the equation to make it complete and
17 that is that this child has been on digoxin therapy,
18 Doctor, according to the records, for some pretty
19 substantial period of time. I believe December 20th
was when the digoxin was first commenced.

20 Would that change any of your answers
21 in any way, Doctor, bearing in mind that digoxin had
22 been withheld, apparently, from the child for a period
23 of four days prior to death?
24
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2 A. I don't think I can answer
3 that because there would be a factor of tissue
4 saturation that one would have to consider.

5 Q. I am sorry, it is actually
6 December 15th, not the 20th.

7 A. If she had received digoxin
8 for some time there would be a factor of tissue
9 saturation, and I can't comment on the pharmacology
10 of digoxin in those circumstances.

11 Q. So then I guess we will have
12 to leave that to a pharmacologist but then what you
13 may have is actual digoxin migrating into some
14 tissues that we have discussed such as the bowel, the
15 stomach and may be lodged in there. Is that the
16 thought that is entering your mind?

17 A. Yes.

18 Q. The other thing that interested
19 me was this relationship that existed between
20 Pathology and Dr. Freedom. You said there was a sign
21 to call Dr. Freedom on any post mortems?

22 A. Yes.

23 Q. What was the purpose of that?
24 Was that simply to alert him to the fact that there
25 was a post mortem to take place so that he could come
down and examine the heart?



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A. I think there were a few purposes. One was for that purpose, to alert him to the fact that a child with a congenital heart problem had died. Secondly was to be available to supervise the pathology resident in the dissection or examination of the heart.

Q. Was he also sort of a link that Pathology had to the cardiac floor?

A. In the sense that he was the one that we saw most often, yes.

Q. If there was something unusual found in the post mortem, would you expect to report it to Dr. Freedom, or would you expect to report it to the referring cardiologist, or to the ward chief?

A. If there was something unusual found in the autopsy I would report it to the staff pathologist supervising the autopsy.

Q. You would not report anything directly to the cardiology floor?

A. No, I would deal with my immediate supervisor.

Q. So it was really accidental that you mentioned the digoxin level you found in the Estrella situation to Dr. Freedom. It was not this sort of information route that we have just discussed -



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part of that route?

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A. That was more of an accident,
yes.

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Q. The last thing that I was
interested in, Doctor, was tissue breakdown. In this
case I understand the autopsy was commenced at about,
in the Estrella case, about 3:00 p.m.?

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A. Yes.

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Q. And the child had died
approximately 12 hours before?

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A. Yes.

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Q. Is the body maintained in some
way to prevent decomposition?

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A. The morgue where the bodies
are held is cooled to try to slow the usual de-
composition, yes.

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Q. After 12 hours, would there
already be signs of decomposition that you would notice
on autopsy?

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A. Not necessarily with the naked
eye, but with the microscope, yes.

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Q. I was just coming to that.
In fact tissue was taken in this case for microscopic
examination, as it is normally taken?

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A. Yes.

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Q. Under the microscope, can one already detect after 12 hours, even with the cooling that you have discussed, the breakdown of cellular tissue?

A. In some cells, yes. Some cells decompose more rapidly than others, so, yes, you can after 12 hours.

Q. What kind of cells have a tendency to decompose most rapidly. Is there some area of the body where the breakdown occurs more rapidly than others?

A. The pancreas, parts of the kidney and the lining of the airways are the ones in which thalýsis occurs most quickly.

Q. What about the myocardium? Where does that fit in? Is there slow or relatively quick decomposition in the area of the heart?

A. The microscopic appearance of the cells is usually preserved for some time. I cannot comment on the rapidity with which the cell contents are lost but certainly the appearance of the cells is maintained for some time.

Q. Because as you appreciate, Doctor, one of the concerns that will ultimately face this Commission is the possible migration of digoxin



Taylor, cr.ex.
(Olah)

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from heart tissue in the blood?

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A. Yes.

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Q. So that the rapidity of

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breakdown of the myocardium becomes a matter of some concern. Your experience is that the myocardium does not tend to break down as quickly as other types of tissue in the body. Is that what you are saying?

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A. The appearances are not as quickly demonstrated under the microscope as in other parts of the body. I cannot comment about how quickly things start going out of cells and into cells. Most cells, at the instant of the cell's death, the molecules and substances within the cells start leaking out, and I do not have a figure for how quickly that occurs in the heart. In almost all cells it occurs immediately after death. What I see under the microscope are very gross changes reflecting in part the function of the cells that are breaking down. For instance, in the pancreas, they are exposed to the acid and enzymes that the pancreas produces. Therefore they break down very quickly.

Q. One final question, when samples are taken how are they preserved? Are they always preserved in some sort of Klotz solution or --

A. In Formalin solution. A small



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2 portion of the organ is placed in a container with
3 Formalin solution.

4 Q. It is from that that the slides
5 are then ---

6 A. Those blocks of tissue are then
7 further trimmed into a size suitable for processing
8 for mounting on slides.

9 Q. Is there some sort of a
10 preservative mounted onto the tissue that is on a
11 slide, or how is that decomposition prevented?

12 A. The fixation process which
13 involves formalin or some other chemical stops the
14 decomposition process, apparent on a light microscopic
15 level, apparent with the microscope. Then the tissue
16 is embedded in paraffin which further stops change.

17 Q. So that what you are seeing
18 under the microscope is essentially what you would
19 see at time of autopsy?

20 A. With some minor artefacts,
21 yes.

22 MR. OLAH: Thank you. Those are
23 all the questions I have.

24 THE COMMISSIONER: Thank you, Mr.
25 Olah. I think not, Mr. Labow, unless you are going
to be very snappy.



Taylor

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MR. LABOW: No, I am in no hurry.

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I will be about 15 minutes.

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THE COMMISSIONER: There is no question of hurry, it is just a question of how many questions you have. There seems to be some problem tomorrow. Do you want to say anything?

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MS. CRONK: It may have evaporated, Mr. Commissioner. I have just learned that Dr. Cutz will be available tomorrow morning when Dr. Taylor has completed.

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THE COMMISSIONER: Then that solves all our problems.

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MR. SHANAHAN: Mr. Commissioner, for the record, I would have no questions of this witness.

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THE COMMISSIONER: All right, thank you. Is there any desire to sit late so that Dr. Cutz could be able to be finished. If we were to sit for another 20 minutes or so here we might be able to finish with this witness.

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MS. CRONK: I am entirely in your hands, sir. I will be about 15 or 20 minutes and my friend has indicated 15 minutes so I would suggest that if we were to sit late it would take a little longer than 20 minutes.

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THE COMMISSIONER: What about Dr. Cutz.



Taylor

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Will we be able to finish him tomorrow?

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MS. CRONK: My hope would be to

finish Dr. Cutz - certainly I will finish in chief

with him tomorrow. Subject to your thoughts on the

matter, I would suggest it might be appropriate to

adjourn at the end of his evidence in chief such that

his cross-examination would not then be interrupted.

THE COMMISSIONER: Yes, all right.

I have not said this, but there is a possibility that

I will be late tomorrow and it is not because I have

slept in or misbehaved or anything else, it is because

of my other job.

MS. CRONK: I should say just on that

note that I am entirely in your hands. If you prefer

to sit later this evening, I think that is Dr. Taylor's

preference, and certainly I would be prepared to do so

but my warning is that it may well take longer than

20 minutes and I certainly expect that will be the

case.

THE COMMISSIONER: You are here though,

Dr. Taylor, tomorrow?

THE WITNESS: Yes.

THE COMMISSIONER: So it is not wildly

inconvenient for you to come back?

THE WITNESS: No.



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THE COMMISSIONER: I think in that
case we will adjourn then until 10:00 or shortly after
tomorrow.

---Whereupon the hearing adjourned until 10:00 a.m
Tuesday, October 4th, 1983.

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